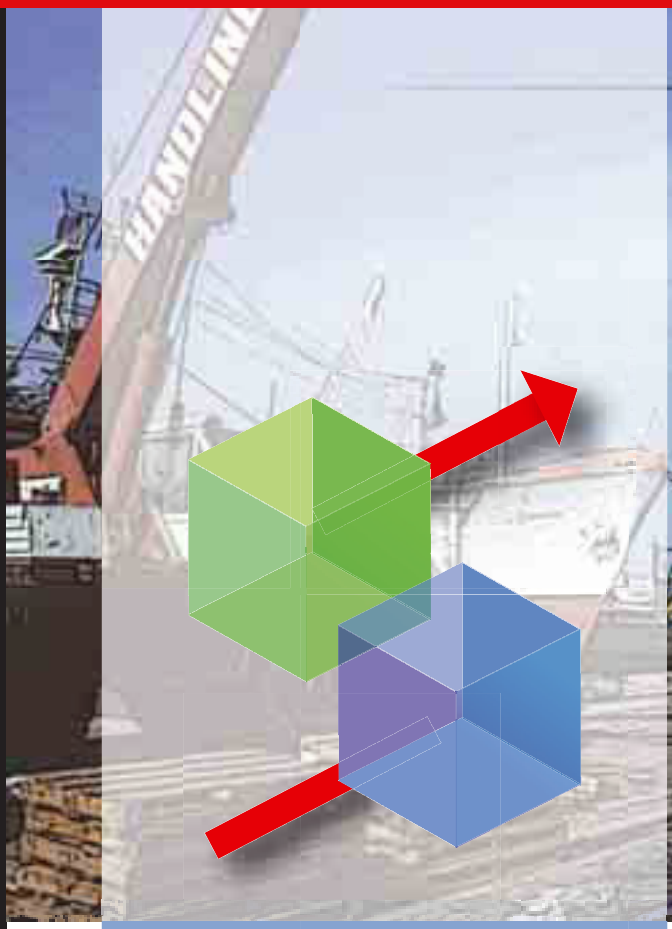

AGRICULTURAL IMPORT SURGES IN DEVELOPING COUNTRIES

Analytical framework and insights from case studies

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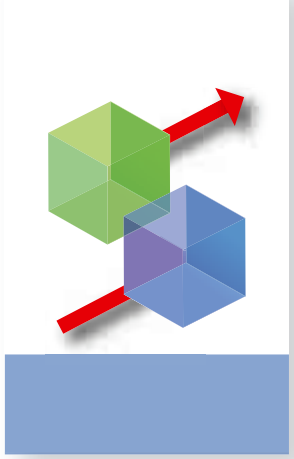
FAO



AGRICULTURAL IMPORT SURGES IN DEVELOPING COUNTRIES

Analytical framework and insights from case studies

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This book is the result of a synthesis based on various reports on a series of import surge studies that have been conducted by the Food and Agriculture Organization of the United Nations (FAO) since 2002. A large number of the FAO import surge reports are the fruits of the import surge project that started in 2005 and funded by the United Kingdom Department for International Development. The main contributors to the various inputs leading to this synthesis document include the following individuals: Danilo Abdula, Adama Coulibaly, Guillermo Alvarado, El Mamoun Amrouk, Samuel Asuming-Brempong, Magdalena Casuga, Ephraim Chirwa, Merritt Cluff, Piero Conforti, Carlos Da Silva, Paola Fortucci, James Greenfield, Harald Grethe, Ali Gurkan, Peter Kedoge, Claremont Kirton, Nouvo Kone, Holger Matthey, Stephen Mbogoh, Nancy Morgan, Jamie Morrison, Victor Mosoti, Harold Ngalawa, Stephan Nolte, David Nyange, Jennifer Nyberg, David Pingpoh, Nimal Ranaweera, George Rapsomanikis, U-Primo Rodriguez, Jean Senahoun, Ramesh Sharma, Michael Westlake, and Yukitsugu Yanoma. Editorial and graphical support from Rita Ashton, Omar Bolbol, Claudio Cerquglini and Adrianna Gabrielli is acknowledged.

ACRONYMS

AB	Appellate Body
ACP	African, Caribbean and Pacific Group of States
AD	Antidumping
AECM	Asymmetric Error Correction Model
AI	Avian Influenza
AoA	Agreement on Agriculture
ASG	Agreement on Safeguards
BISD	Basic Instruments and Selected Documents
BTA	Border Tax Adjustments Test
CAFTA	Central America Free Trade Agreement
CAP	Common Agricultural Policy
CARICOM	Caribbean Community and Common Market
CCFRS	Certain Carbon Flat-Rolled Steel
CET	Common External Tariffs
CFA	Communauté Financière Africaine
C.I.F.	Cost, Insurance, Freight
COMESA	Common Market for Eastern and Southern Africa
CSO	Civil Society Organizations
DEIP	Dairy Export Incentive Program
DRC	Domestic Resource Cost
DR – CAFTA	Dominican Republic- Central America Free Trade Agreement
DSU	Dispute Settlement Understanding
EAC	East African Community
ECOWAS	Economic Community of West Africa
ECM	Error Correction Model
EEC	European Economic Community
EPC	Effective Protection Coefficient
EUR	Euro currency
FAO	Food and Agriculture Organization of the United Nations
FDI	Foreign Direct Investments
FFTJ	Fittings, Flanges and Tool Joints

FIML	Full Information Maximum Likelihood
FTA	Free Trade Area
f.o.b.	free on board
GATT	General Agreement on Tariffs and Trade
GBP	British Pounds
GDP	Gross Domestic Product
GHC	Ghanaian Cedi
GPHA	Ghana Ports and Harbour Authorities
HFCS	High Fructose Corn-Syrup
HS	Harmonized System (codes)
IMF	International Monetary Fund
IS	Import Surge
ITC	International Trade Commission of the United States
KDB	Kenya Dairy Board
KRA	Kenya Revenue Authority
LDCs	Least Developed Countries
LIFDCs	Low-income Food-deficit countries
MFN	Most Favoured Nation
MOFA	Ministry of Food and Agriculture of Ghana
NAFTA	North America Free Trade Agreement
NSP	Net Social Profits
NGO	Non-governmental Organizations
NPC	Nominal Protection Coefficient
OECD	Organisation for Economic Co-operation and Development
PAM	Policy Analysis Matrix
PSE	Producer Subsidy Equivalent
R&D	Research and Development
SA	Safeguards Agreement
SADC	Southern African Development Community
SAP	Structural Adjustment Program
SCB	Social Cost-benefit
SCM	Subsidies and Countervailing Measures
SGR	Strategic Grain Reserve
SMP	Skim milk powder

SPS	Sanitary Phytosanitary
SRID	Statistics and Research Department
SSG	Special Safeguards
SSM	Special Safeguard Mechanism
STE	State Trading Enterprises
TBT	Technical Barriers to Trade
TCI	Taxe conjoncturelle à l'importation
TDP	Taxe dégressive de protection
TECM	Threshold Error Correction Model
USD	United States Dollars
UEMOA	Union économique et monétaire ouest-africaine
UR	Uruguay Round
USITC	United States International Trade Committee
VAR	Vector Autoregressive
VECM	Vector Error Correction Model
WAEMU	West African Economic and Monetary Union
WMP	Whole milk powder
WTO	World Trade Organization
XOF – Senegal	Communauté financière africaine
XAF – Cameroon	Communauté financière africaine

PART 1

IMPORT SURGES: THEORETICAL AND LEGAL FRAMEWORK

INTRODUCTION 1

1.1 Why this book?

Food imports particularly by net food importing developing countries have risen and are expected to rise further as population and income rise (Paulino, 1986, Ivory 1990). The impact of the increase in food imports varies across countries, commodities and socio-economic groups within the countries (Ng and Aksoy 2008). There has been growing concern backed by claims of some international civil society organizations that in some developing countries experiencing surges in food imports, while some population groups, mainly consumers, will benefit, others, such as small producers, may seriously suffer. The concern and the claims that the problems linked to rising food imports will grow even larger in the coming years, especially if tariffs worldwide are further reduced, add to the worry that in developing countries, import competing sectors lack alternative forms of safeguards to shield them against any adverse effects of rising food imports. The concern also increases when the food imports are sudden and unpredictable, i.e. viewed as "import surges", because of the lack of understanding of how to cope with the risk associated with their unpredictability which complicates decision making at the production and market levels.

Determining appropriate measures to be taken to correct or mitigate the effect of import surges in developing countries becomes therefore an important task. Hasty reactions such as the full restriction of agricultural and food imports and the use of some safeguard measures to protect the import competing sector may become controversial especially because of the lack of analysis justifying their uses and defining their implementation procedures. Such measures often target only the well-being of some stakeholders and overlook the economy-wide effects. Likewise, in most of the reported cases of import surges, it is not always clear whether the observed injuries or benefits were solely due to import surges to justify such restrictions. Moreover, the measures taken, even if they are justified, may not comply with the countries' trade commitments and market reforms and may upset the long-term development objectives. There has been a knowledge gap concerning how the import surges and the measures taken to deal with them square with the countries' agricultural development policies to reduce food insecurity and poverty.

It is therefore important to increase the level of understanding of issues around agriculture and particularly food import surges in the case of developing countries where agricultural production and marketing are often highly vulnerable to import surges. It is for this reason that the Food and Agriculture Organization of the United Nations (FAO) undertook a series of country studies aimed specifically at identifying food import surges and analysing their sources and impacts. The legal frameworks for the identification of import surges and injuries as well as the appropriate remedies have long been discussed under World Trade Organization (WTO) negotiations. For the country case studies, FAO developed a methodology based on the General Agreement on Tariffs and Trade (GATT)/WTO frameworks.

1.2 Objectives

The main purpose of this book is to increase the level of understanding of the phenomenon of agricultural and mostly food import surges including their sources and consequences drawing upon the series of FAO country case studies and other background work.[1] It has two specific objectives. The first is to examine the theoretical and legal frameworks underlying an import surge based on reviews of the definition and identification of an import surge and its potential causes and likely effects. The second is to synthesize the findings of the FAO country case studies including implications for ways to deal with import surges and especially to provide informed guidance to policy-makers to respond to the surge's consequences.

1.3 Organization of this book

This book is composed of three parts. The first two address the two specific objectives directly, while the last part contains the country case studies. The first part, *Part I*, deals with the theoretical and legal frameworks regarding agricultural import surges and includes this introduction chapter and four other chapters. This chapter continues with a review of various definitions of import surge. Chapter 2 explains ways to identify import surges; Chapter 3 describes the main sources of import surges; Chapter 4 elaborates on the potential consequences of import surges; and Chapter 5 cites the main methodological challenges in identifying the presence, sources and consequences of the import surges and presents an FAO manual on how to address these challenges especially for country case studies.

The second part of the book, *Part II*, focuses mainly on the examination and synthesis of country and commodity (mostly food products) case studies and comprises five chapters. Chapter 6 introduces and describes the countries and commodities chosen in the FAO case studies on import surges. Chapter 7 highlights what the sources of import surges in developing countries are. Chapter 8 examines the consequences (injuries and benefits) of the import surges in developing countries. Chapter 9 reviews some of the government reactions to the import surges. Finally, Chapter 10 summarizes the findings, lessons learned and implications from these case studies.

The last part of this book, *Part III*, displays two selected papers to illustrate the country case studies undertaken by FAO in Kenya and the Philippines during the period 2004-06

1.4 Definition of import surges

To begin with, it is important to note that there is no unique or strictly conventional definition of an import surge. Dictionaries define the term "surge" as sudden, sharp and unexpected increases in the variable in question. The WTO Agreements on general trade remedy measures (i.e. antidumping [AD], countervailing and emergency safeguards) refer to the concept of an import surge in a more general way than that in the dictionaries. A useful working definition is found in Article 2 of the Agreement on Safeguards (ASG):

> "When a product is imported into a country in such increased quantities, absolute or relative to domestic production, and under such conditions as to cause or threaten to cause serious injury to the domestic industry that produces like or directly competitive products".

Thus, a surge is associated with some form of "unusualness", i.e. a significant break from some established trend. An import surge occurs when the volume (or the value) of imports increases in a period of time over its normal level to an extent that is considered 'excessive' according to some predetermined criteria. There is no unique and accepted definition of these criteria but more often than not, these criteria tend to relate to the duration, the amount of imports compared with what is considered as the normal or base level of imports. The WTO texts contain relevant safeguard provisions concerning import surges, although these agreements no longer use the term "import surges".

[1] Although in the framework the discussion concerns agricultural import, the case studies focus mostly on food products. Tobacco is the only non-food products included in the case studies.

1.5 World Trade Organization (WTO) provisions: safeguards mechanisms

The definitions of import surges and its impacts always invoke the measures that governments may take to deal with the negative consequences of the surge. It is therefore important to introduce here the various measures in line within the WTO Agreements and negotiations on what are called the provisions on safeguards. Box 1.1 summarizes these provisions in the WTO Agreements and in the Doha Round related to import surges with some of the key concepts and terminologies employed, especially on the Agreement on Safeguards and the Special Safeguards (SSG).

Safeguards as WTO legal framework to deal with import surges[2]

The potentially adverse effects of import surges on domestic markets and the agricultural sector, particularly in developing countries, have received enough attention to prompt the concepts of safeguards to protect against any 'injurious' import surge. However, where trade restraint responses are deemed to be appropriate to curtail import surges and to meet national objectives, existing WTO compatible policy options are relatively limited and difficult to implement by many developing countries. The Agreement on Agriculture (AoA) text, Article 5(1a), allows safeguard measures to be put in place by certain countries. Under WTO, the instruments currently available for dealing with disruptive increases in imports are the ASG, and the SSG provision of the AoA.

Agreement on safeguards (ASG)

Under the ASG, safeguards can be applied only after detailed investigation has been conducted to substantiate the presence of significant injury or threat of serious injury. Furthermore, a causal link needs to be established between the claimed damage and the import surge. The rules are generally cumbersome and difficult to interpret particularly as regards to causality and the non-attribution of other factors to the damage.

The term "safeguards" is used in reference to government actions responding to imports that are considered "harmful" to the importing country's economy or domestic industries that produce goods that are in competition with or "similar" to the imported products. Typically, government intervention takes the form of an import restraint or control through increased tariffs or quantitative restrictions. Sometimes, the exporting country may voluntarily restrict its own exports, usually within negotiation with the importing country. Article XIX of the GATT and the WTO ASG prescribe the obligations of WTO members with regard to how they should apply safeguard measures in response to import surges. The economic analysis of import surges has to be conducted in this context for it to be consistent with the rules. A legal analysis of the interpretive approaches to some of the key concepts in the WTO Agreements hence becomes useful.

All WTO trade-remedy agreements, the ASG and GATT Article XIX contain terms and phrases that remain ambiguous and open to various interpretations. The ambiguity in the terminology is a reflection of the difficulties in striking a compromise during the negotiations of the particular agreement, or simply a desire to accommodate variations in state practice on the same issue within the same provision. The terminology is also motivated by the need for countries to justify their use of safeguard protection in most circumstances. Making sense of these unclear or ambiguous provisions can be a daunting task, particularly when the sound economic analysis of a problem is predicated on a precise definition or identification of the elements of a provision, and hence the applicable economic variables.

According to Article 3.2 of the *Understanding on the Rules and Procedures Governing the Settlement of Disputes* (DSU), the WTO dispute settlement system is charged with the task of maintaining the balance of negotiated concessions by clarifying the existing provisions in WTO Agreements in accordance with the customary rules of interpretation of public international law. Over the past decade, there is evidence that international trade relations have indeed become much more legalized under the WTO, pursuant to the adoption of the Uruguay Round agreements and, in particular, the DSU. The DSU ushered in a variety of reforms to the old GATT

[2] See also Mosoti and Sharma (2005), for more details.

Box 1.1
Summarizing WTO provisions related to import surges

There is no unique and accepted formal definition of "import surge" under WTO Agreements and discussions continue concerning this phenomenon. The following is a summary of the main provisions currently in place.

- **Agreement on Safeguards (ASG)**

Formal definition of import surge: none.

Description: increased quantities, in absolute terms or relative to domestic production, being imported under such conditions as to cause or threaten to cause serious injury to the domestic industry that produces the like or directly competitive products. This definition was further interpreted to mean "that the increase in imports must have been recent enough, sudden enough, sharp enough and significant enough, both quantitatively and qualitatively, to cause or threaten to cause 'serious injury'."

Methodology to substantiate injury: the presentation by the national authorities should include all relevant factors of an objective and quantifiable nature having a bearing on the situation of the industry, and in particular the rate and amount of increase in imports in absolute and relative terms; the share of the domestic market taken by increased imports; and changes in the level of sales, production, productivity, capacity utilization, profits and losses and employment. A causal link must be established between the claimed damage and the import surge, and it must be verified that other factors are not responsible for the injury to the domestic industry (the "non-attribution" requirement).

Difficulties in implementation: beyond the requirement that all the factors listed be "evaluated" in each case, it remains unclear what conditions will support a finding of serious injury or threat, and what degree of confidence will be given to the information presented by national authorities. Also, while it is not difficult to demonstrate the occurrence of a surge and of its negative impact, it is far more difficult to substantiate causality and the non-attribution of other factors to the damage. In general, the rules are cumbersome and difficult to interpret, particularly for many developing countries.

- **Agreement on Special Safeguard (SSG)**

Formal definition of import surge: none

Description: a situation when safeguard action is authorized based on a rise in import quantities or a sharp fall in import prices for which the corresponding volume and price triggers are defined.

Quantitative threshold to define a surge: in the case of a volume surge, the import trigger is related to the actual level of average imports over the preceding three years, to the share of imports in domestic consumption and to the absolute volume change in domestic consumption. The trigger price is defined as the average c.i.f. unit value during 1986-88, expressed in domestic currency.

Methodology to substantiate the presence of a surge: based on statistical information. For the volume trigger, statistics are needed for monthly imports over the three years preceding the surge, as well as for changes in consumption. For the price trigger, statistics are needed for the current c.i.f. import price and the average c.i.f. price for the base period, 1986-88.

Requirements for safeguard measures: based on schedules regarding the amounts by which the trigger levels are exceeded, additional duties may be levied until the end of the year.

Methodology to substantiate injury: injury tests are not required under the SSG.

Difficulties in implementation: the right to use the SSG is reserved to only 38 WTO Members (of which 22 are developing countries) which undertook tariffication (the process of converting non-tariff barriers into tariffs during the Uruguay Round) and solely for a limited number of products. For instance, only six developing countries evoked the SSG provision during 1995.

- **Proposals for market access flexibilities under discussion in WTO**

In the ongoing discussions regarding the modalities to be agreed for the Doha Round negotiations, two proposals relating to imports for developing countries are under consideration.

Special Safeguard Mechanism (SSM): this mechanism is included in the Doha Round package (and not the Uruguay Round) and intended to allow the imposition of duties above bound ceilings to protect developing countries' domestic farm sectors from import surges. Outstanding issues include product eligibility, possible volume and price triggers, and whether the mechanism should be temporary or indefinite.

system, including greater clarity of rules, binding decisions, and a standing Appellate Body (AB).

The WTO dispute settlement system has generated a large number of the Panel examining the dispute (henceforth, the Panel) and AB reports, some of which touch or focus on aspects of the ASG, and the administration of safeguard measures in general. These reports contain legal interpretations that are valuable for guiding the economic analysis of concepts such as "increased imports", "causation", "causation and non-attribution", "serious injury", and "threat of serious injury", "like or directly competitive products", "domestic industry", and many others.

Special safeguards (SSG)

This is a situation in which a safeguard action is authorized based on a rise in import quantities or a sharp fall in import prices for which the corresponding volume and price triggers are defined. In the case of a volume surge, the import trigger is related to the actual level of average imports over the preceding three years, to the share of imports in domestic consumption and to the absolute volume change in domestic consumption. The trigger price is defined as the average c.i.f. unit value during 1986-88, expressed in domestic currency.

For the volume trigger, data on monthly imports as for changes in consumption over the three years preceding the surge are needed. For the price trigger, statistics are needed for the current c.i.f. import price and the average c.i.f. price for the base period, 1986-88. Also based on schedules regarding the amounts by which the trigger levels are exceeded, additional duties may be levied until the end of the year. It is noted that no injury test is required under the SSG.

Special safeguard mechanism (SSM)

In the Doha Round of Multilateral Trade Negotiations, one of the proposals put forward to help developing countries respond to disruptive import surges is that of an SSM. This mechanism would allow the imposition of additional duties to protect domestic farm sectors from import surges. While the proposal has attracted considerable attention, many issues remain outstanding, including product eligibility, the mechanisms for volume and price triggers, the resultant remedial action, including the level of additional duties, and the duration of application. Obviously, agreement on such flexibility provisions to deal with disruptive import surges is important in a context of negotiations aimed at achieving further reductions in bound tariff rates. Appropriate flexibility may also need to be introduced in regional and bilateral agreements which, however, often contain clauses that limit the application of safeguard clauses. Various opinions remain on the SSM and are debated on in the negotiations towards the conclusion of the Doha Round. These opinions concern product eligibility, trigger levels and the use of additional import duties.

All these definitions and concepts on import surges and the safeguards in this Chapter are important for the rest of this book. They serve as the basis of the legal and theoretical framework shaping the study on import surge.

References

Ivory, P. 1990. Food import growth in the Developing Countries. Trocaire Development Review. pp. 59-71.

Mosoti, V. & Sharma, R. 2005. The interpretation of various import surge-related concepts and definitions in the WTO legal text. FAO Import Surge Project Working Paper No. 3, May 2005.

Ng, F. & Aksoy A. 2008. Who are the net food importing countries? Policy Research Working Paper No. 4457. The World Bank.

Paulino, L. 1986. Food in the third world: Past trends and projections to 2000. Research Report No. 52. International Food Policy Research Institutes.

World Trade Organization. The SSGs provisions of the Agreement on Agriculture. Accessed online http://www.wto.org/english/docs_e/legal_e/ursum_e.htm#aAgreement

Identification of import surges

2

2.1 Overview on the identification of import surges

Although there is no unique or conventional definition of the import surge, the use of the historical data on countries' imports and on the assessment of injuries helps identify an import surge. The identification process uses statistical measures but views from stakeholders are also important. The difficulty in the identification process is that there has been no agreement on a single best market indicator (import price, import volume, market share, or profit) to assess the presence of import surge and especially to distinguish a surge from a trend. An import surge is qualified as a sudden and often relatively short-lived increase in import, but it can easily be confounded with a long running and increasing trend or with other factors that cause changes in the market indicators. This chapter is built on the FAO studies by De Nigris (2005), Mosoti and Sharma (2005) and Sharma (2005) and deals with the theoretical and practical ways to identify import surges.

2.2 Quantitative threshold to define an import surge and its duration

2.2.1 Quantitative threshold

There is no unique quantitative threshold (in both prices and volume) to define an import surge. Article 2.1 of the ASG that sets forth the conditions for the application of a safeguard measure introduces a vague identification of an import surge:

> "...A Member may apply a safeguard measure to a product only if that Member has determined … that such product is being imported into its territory in such increased quantities, absolute or relative to domestic production, and under such conditions as to cause or threaten to cause serious injury to the domestic industry that produces the like or directly competitive products...."

The ASG Article is however vague and is subject to various interpretations; some of these interpretations are presented and summarized in Table 2.1 and are useful in examining the framework in the identification of an IS.

In the United States Steel dispute, for instance, an open interpretation leads to the following provision:

> "In the investigation to determine whether increased imports have caused or are threatening to cause serious injury to a domestic industry under the terms of this Agreement, the competent authorities shall evaluate … the rate and amount of the increase in imports of the product concerned in absolute and relative terms …
>
> The Panel in the *United States Steel* case interpreted that Article 4.2(a) of the ASG sets forth the "operational requirements" for determining whether the conditions identified in Article 2.1 exist."

The operative word in Article 2.1 is "or", in "absolute *or* relative to domestic production" and

TABLE 2.1
Various concepts and definitions interpreted by different WTO safeguards Panels and ABs

Topic/concept/issue	Which Panel and AB report addresses this topic substantially
IMPORT SURGE	
Increased imports (absolute, relative)	(1) United States – wheat gluten; (2) United States – line pipe; (3) Chile – price band; (4) Argentina – peach; (5) United States - steel
Unforeseen developments	(1) Korea – dairy; (2) Argentina – footwear; (3) United States – lamb; (4) United States – line pipe; (5) Chile – price band; (6) Argentina – peach
Article 2.1 "Under such conditions"	(1) Korea – dairy
INJURY	
Serious injury	(1) Korea – dairy; (2) United States – wheat gluten; (3) United States – line pipe; (4) United States - steel.
Threat of serious injury	(1) Argentina – footwear; (2) United States – lamb; (3) United States – line pipe; (4) Chile – price band; (5) Argentina – peach; (6) United States - steel
INDUSTRY/LIKE PRODUCTS	
Industry definition	(1) Korea – dairy; (2) United States – lamb; (3) Chile – price band; (4) Argentina – poultry; (5) United States - steel
Like products	(1) Argentina – footwear; (2) United States - steel
REMEDY	(1) Korea – dairy; (2) United States – line pipe; (3) Chile – price band.

Sources: Mosoti and Sharma (2005)
Note: Dates of various Panel reports issued: Korea – dairy June 1999; Argentina – footwear June 1999; United States – wheat gluten July 2000; United States – lamb December 2000; United States – line pipe October 2001; Chile – price band May 2002; Argentina – peach February 2003; Argentina – poultry April 2003 (Relevant AD case); and United States – steel May 2003 (Appellate Body report November 2003)

creates confusion. In the *United States steel*, of the ten products, the Panel chose to look at the relative surge data instead of the absolute data, and made a positive judgement on this basis. It noted that the ASG makes clear that increased import requirement is one of an increase in *either* absolute or relative terms. Moreover, the Panel explained:

> "If absolute imports decrease, but imports, relative to domestic production, are on the rise, this means that the decrease of domestic production is stronger than that of imports (in absolute levels)."

In contrast, the AoA's SSG had an exact definition of a surge. Thus, for volume trigger, then there is a formula using actual data. It compares the actual monthly import data with a trend of three-year moving average import volume. The surge is then defined as an upward deviation of the actual data from the three-year moving average trend. Usually an import that is more than 20 or 30 percent above the three-year moving average trend qualifies as an import surge and prompts some actions (such as the safeguards), from policy-makers, to limit its effects. These percentage numbers, also known as thresholds or trigger points, may vary across country. Equivalently, under the SSG text, trigger point or threshold on prices (c.i.f) can be also used to define an import surge and justify the use of the safeguard.

2.2.2 Duration of the surge

It is not surprising either that there is no conventional benchmark on how long a surge should last before calling it a surge. In the Argentina–Footwear case, as described in Table 2.1 above, the increased import requirements were interpreted by the AB to mean "that the increase in imports must have been recent enough, sudden enough, sharp enough and significant enough, both quantitatively and qualitatively, to cause or threaten to cause 'serious injury'." In the United States Steel case, the United States had argued that these four standards do not appear in the ASG itself and so the threshold issue does not apply in relation to these four features.

In response, the *United States Steel* Panel clarified that the Panel's "increased import" finding is a statistical matter, albeit reached in a subjective way. The finding of a surge is called "*the condition of the increase*". However, the question of whether a particular increase is "sudden, sharp, recent and significant *enough as to cause serious injury* is a question that is to be appropriately addressed in the context of *causation of serious injury*, not in the context of the *condition of the increase* alone." Thus, the Panel's increased imports finding "must be read together" with its subsequent findings on the other Article 2.1 conditions.

2.3 Length of time to be investigated and data use

The Panel stated in the *United States Steel* case that while the GATT and ASG are also silent on the *points in time that are to be compared*, as well as on the *length of the period to be investigated*, the determination of whether or not imports have increased "would normally call for a comparison of levels of imports in different periods or at different points in time." In the *United States Steel* case, the complainants did not challenge the five-year period of investigation used by the United States International Trade Committee (USITC). So, in a way, this was accepted, adding, according to the Panel, that some of these parameters may vary on a case-by-case basis.

The Panel in *United States Line pipe* interpreted that "recent" does not mean that it must continue up to the period immediately preceding the investigating authority's determination, nor up to the very end of the period of investigation. While the most recent data must be the focus, it should not be considered "in isolation" from the data pertaining to the less recent portion of the period of investigation.

Nonetheless, the Panel emphasized that given the language "are being", "there is an implication that imports, in the present, remain at higher (i.e. increased) levels." As a result, it explained that whether a decrease at the end of the period would preclude a finding of "increased imports" will depend on whether a previous increase nevertheless results in the product still being imported in "increased quantities." In short, in the case of a decrease at the end of the period of investigation, the Panel explained that the key factors that "must be taken into account are the duration and the degree of the decrease …, as well as the nature, for instance the sharpness and the extent, of the increase that intervened beforehand."

The Panel also stated that "competent authorities are required to consider the *trends* in imports over the period of investigation, as suggested by Article 4.2(a)." However, it added that the rate of the increase need not always accelerate or need not always be positive at each point in time during the period of investigation. In addition, given the requirement in GATT Article XIX that the purpose of a safeguard measure is to address "unexpected events," increased imports must therefore be "sudden."

For practical purposes, the period of a study based on monthly observation should be a minimum of three years, to have enough observation to compute a three-year moving average trend. Besides, the choice of the point in time on which the study has to focus on depends on the purpose of the analysis. For decision-makers pressed to intervene for the occurrence of a surge, the most recent point in time in the data would serve as the best reference in order to minimize the risk of having some structural changes in the data affecting the prediction; structural changes are more likely the longer the lag between the time of intervention and the point of reference. However, if for instance the purpose is to analyse a particular event at some point in the past, then analysts may choose an earlier date as a reference.

Box 2.1
Illustrations of the identification of surges in the United States steel dispute

- The *United States Steel* dispute involves ten products or groups, and an account of the Panels' determination of a surge, or lack of it and illustrates a wide range of cases and issues. Of the ten product groups considered, the Panel found that the ITC failed to provide an "adequate and reasoned" explanation of increased imports in four instances (Figure 1). In the other six cases, a surge was established on the basis of absolute increase in three cases (Figure 1) and on a relative basis in the other three (Figure 2).
- *CCFRS*: the Panel found that the increase in imports, which occurred until 1998, "was no longer recent enough at the time of the determination," and thus there was no evidence that in October 2001 CCFRS "is being imported in … increased quantities". The evidence was rejected. The AB agreed with the Panel.
- *Tin mill products*: the Panel concluded that the US International Trade Commission (ITC) did not come with "adequate and reasoned explanation" in respect of "increased quantities" because various ITC commissioners made conflicting conclusions, in part because they defined the like products differently. So this was a conclusion reached more on procedural reason than data analysis. The AB reversed the Panel's findings.

2.4 Various identification issues:

2.4.1 Subproducts in a dispute involving a grouped product

In the *United States Steel* case (see Box 2.1), with reference to the product category of CCFRS, the Panel refused to consider arguments by the complainants with regard to the question of whether imports of the various products comprised in CCFRS, taken individually, have increased. In particular, the Panel noted that the USITC's determination addressed increased imports only with regard to a category defined as "CCFRS products" and it is that determination which is subject to review in this dispute. For similar reasons, the Panel refused to address arguments by certain complainants in the context of welded pipe that the ITC was supposed to make findings on specific products they referred to as "certain tubular products."

2.4.2 Net versus gross import

Ideally, net import, rather than gross import, is most desirable for import surge analysis, especially when the imported and domestic products are close substitutes or almost undifferentiated from one another. Indeed, when the imported product is later re-exported, net import becomes more relevant. But in the case where the imported product is differentiated from its domestic rival with little or no re-export taking place, the use of gross import figures in the analysis is preferable. Nevertheless data availability constrains the choice between the use of net and that of gross import figures.

2.5 Concluding remarks

The determination of import surge suffers from the lack of or sometimes, vagueness of the conventional and legal frameworks underlying the trigger points or thresholds for volume, price and duration of the import surge. But with relevant data at hand, these deficiencies should not impede the analysis aimed at identifying an import surge. Past disputes at WTO level on import surge and some safeguard measures showed that some practical guidelines can be agreed upon as the identification process is specific to the commodity and the trading countries involved. The lack of strict definition on the thresholds and duration of the surge should not weaken the need to analyse the causes of an import surge and especially the estimation of its impacts on various stakeholders.

FIGURE 2.1

Seven cases in the United States steel dispute where the Panel chose to determine the occurrence of an import surge based on data on absolute increase in imports

(All import volumes in million short tonnes; one short tonne is about 0.907 tonnes)

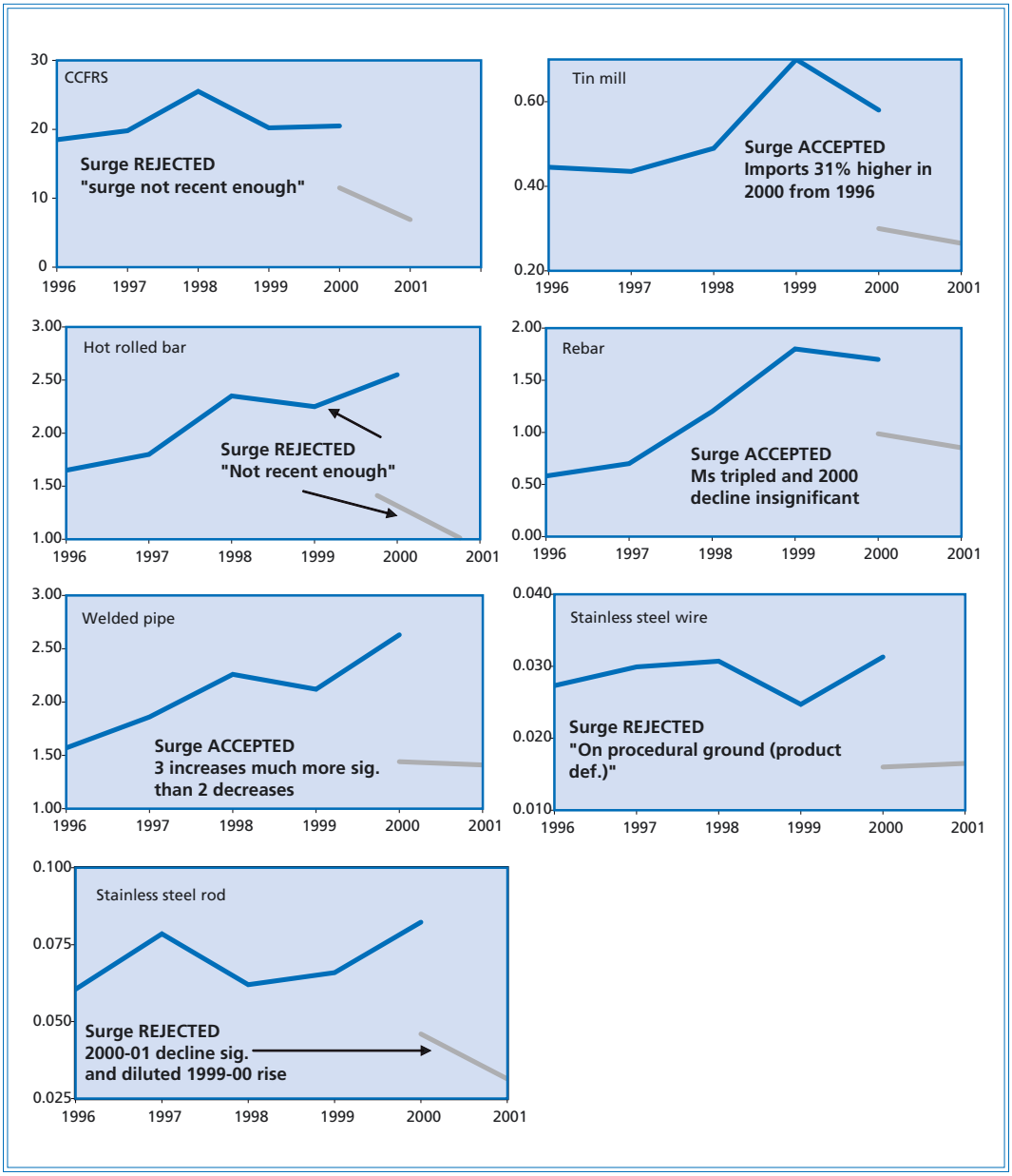
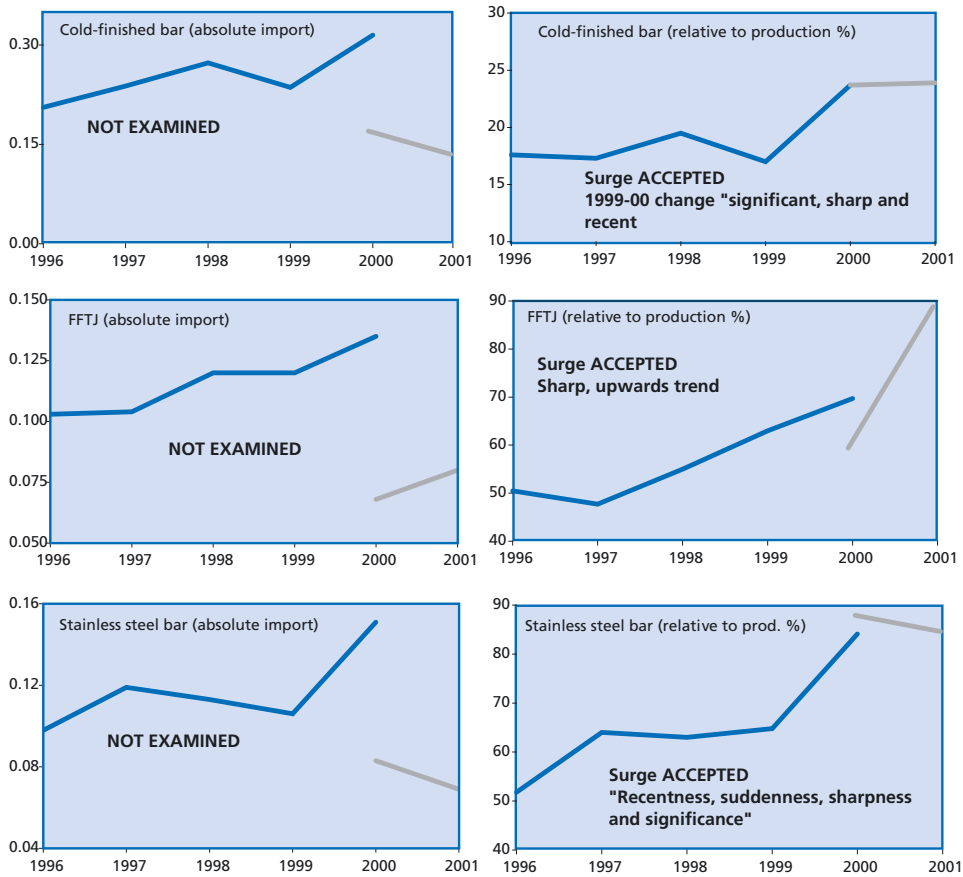


FIGURE 2.2

Three cases in the United States steel dispute where the Panel chose to determine the occurrence of an import surge based on data on imports relative to domestic production

(Graphs on left-side import volumes in million short tonnes (about 0.907 million tonnes); graphs on right side imports as % of production)



Hot-rolled bar: the Panel found that imports in most recent periods (since 1998 and in the interim 2000 and 2001) did not conform to "recent enough" criterion. So, the claim of a surge was rejected. The AB agreed.

Cold-finished bar: the Panel accepted a surge based on "relative import trends". It noted that the data on relative imports demonstrated an "up-and-down" movement between 1996 and 1999, with a 41 percent increase occurring at the end of the period. The Panel found that there was "no need to make findings on absolute imports, as such findings could not change the overall result.[1]"

Rebar: absolute imports more than tripled from 1996 to 1999 and then "declined relatively insignificantly" in 2000 and in the interim 2001. The Panel stated that "the increase until 1999 is recent enough and the subsequent decrease, in comparison, small enough in order to support" a finding of increased quantities. Thus, the surge claim was accepted, and there was no need for examining relative imports.

Welded pipe: the data demonstrated that absolute imports declined from 1998 to 1999 but increased for all other years. Moreover, the increases were more significant than the decreases, such that imports remained at "increased levels even in the most recent past." Thus the Panel agreed to the surge claim.

Interestingly, the Panel rejected an argument by Switzerland that the increase of imports was not a case of a "surge" but one of "steady" and "gradual" rise in imports, and therefore the domestic industry had time to "adjust", and so no Safeguard action was needed. The Panel held that this question should be addressed within the context of serious injury and causation, and not in surge determination.

FFTJ: the Panel chose the data on relative imports in this case. It considered that the following facts supported a finding of "increased quantities" in respect of relative imports:

- the amount by which relative imports increased during the entire period of investigation;
- the end of the period of examination showed the most significant increases;
- only the period from 1996-1997 showed a decrease and this decrease was less significant than each of the year-to-year increases; and
- the increase shows a "certain degree of sharpness, suddenness and significance, particularly
- in the very recent past."

Given its finding regarding relative imports, the Panel did not consider it necessary to make findings on absolute imports.

Stainless steel bar: as in FFTJ, the data on relative imports were considered, and the Panel agreed with the USITC claim of a surge. The relative imports increased significantly during the overall period of investigation; the largest single percentage increase occurred in 2000; and the slight decrease in the most recent past was insignificant and did not detract from a finding that levels remained at high levels. The Panel was also "satisfied" that the sharp increase from 1999 to 2000 "shows a certain degree of recentness, suddenness and significance." As elsewhere, given this finding, the Panel found no need to make findings on absolute imports.

Stainless steel wire: as in the tin mill products, the Panel rejected the surge claim on procedural grounds, stating that the conclusions were not reasoned and adequate because of different conclusions reached by ITC commissioners and mixing of products (some using a broader product category - namely, stainless steel wire and rope). The AB reversed the Panel's findings by stating that there needs to be "adequate and reasoned" explanation in each case.

Stainless steel rod: the Panel found the ITC's explanation in respect of both absolute and relative imports to be inadequate. In particular, while focusing on the increases that took place between 1996 and 2000, the ITC "acknowledged" but did not explain the sharp decline in absolute imports between interim 2000 and interim 2001, in relation to previous increases. The AB upheld the Panel's findings.

[1] There are some cases of this sort where a claim was accepted or rejected based on either absolute trend or a relative trend. It is not clear why a panel can choose to start with one of these. Where a case is established on the ground of a relative or an absolute surge, the other case is not examined stating that it is not necessary.

Source: Mosoti and Sharma (2005).

References

De Nigris, M. 2005. Statistical analysis of import surges and production trends, FAO Import Surge Working Paper No. 2, FAO, Rome, May 2005.

FAO. 2005. A Special Safeguard Mechanism for Developing Countries. FAO Trade Policy Technical Note on Issues related to the WTO Negotiations on Agriculture No. 9, FAO, Rome.

GATT. 1994. *Schedules of market access concessions.* Electronic version, Geneva.

Mosoti, V. & Sharma, R. 2005. The interpretation of various import surge-related concepts and definitions in the WTO legal text. FAO Import Surge Project Working Paper No. 3, May 2005.

Sharma, R. 2005. Overview of Reported cases of Import Surges from the Standpoint of Analytical Content. FAO Import Surge Project Working Paper # 1.

World Trade Organization. The Special safeguards provisions of the Agreement on Agriculture.

Potential sources of import surges

3

3.1 Main types of contributing factors

Knowledge of the sources of an import surge allows policy-makers to take appropriate and necessary measures to control, i.e. to reverse or to accommodate the surge's effects. This chapter investigates some of the potential sources of an import surge especially in developing countries. It draws largely from Grethe and Nolte (2005).[1] Many factors can lead to an import surge and some of them often originate in the importing country itself. Domestic factors, and especially structural production constraints, may be far more important and widespread in determining the onset of import surges. These include domestic supply instability because of climatic or political reasons, changes in market and trade policies, or changes in the exchange rate policy of the importing country. Other factors contributing to import surges are exogenous (i.e. causes originating from the trading partners or from a third country). These exogenous or external factors include export subsidies, export credits, food aid, domestic support and exchange rate policies. The internal and external factors may work alone or, more often, interact simultaneously. These potential contributors are discussed in detail in this chapter, arguing eventually that it is the combination of these factors rather than their individual actions alone that is observed in the real world and should be the focus of the surge identification.

[1] See also De Nigris (2005)

3.2 Potential domestic causes

3.2.1 Domestic production shortfalls

Production shortfalls are one of the most likely causes of short-term import surges. Temporary production shortfalls due, for instance, to inclement weather and incidence of pests or diseases that disrupt domestic production may lead to surges in imports. The shortfalls can also be the consequences of other factors, such as civil strife or disruptions of the supply of inputs. Overall, production shortfalls signal some deeply rooted structural constraints that impede a sustained growth of domestic production to meet a rising domestic demand. They also expose the lack of tools to prevent and manage production risks. For many agricultural products, a positive correlation between the source of production shortfalls and level of import is an indication of whether or not the production shortfalls trigger import surges.

3.2.2 Domestic market liberalization and reforms

Measures taken by government to liberalize the domestic market may also lead to import surge. For instance, the elimination of the countries' producer subsidies may shrink production and encourage more and more imports to avoid a shortage. Likewise, the dismantling of the marketing board and relaxing of the import licensing rules allow swift entries of new importers and hence, increase in import. Also, reduction (or increase) in consumer taxes (or subsidies) may prompt the surge of import.

In the past, many developing countries have protected the domestic producer of staple foodstuff by limiting or preventing imports in the period after the main domestic harvest, opening their borders only after the bulk of domestic production had been sold. This, for example, was traditionally the practice in some of the small economies that border South Africa.[2] Others have sought to protect domestic processing by permitting imports of grain but not flour.[3] Elimination of such protection causes a surge in imports.

3.2.3 Border policy reforms (trade liberalization and trade reforms)

Reductions in tariff and non-tariff barriers to trade, particularly following the launch of the Uruguay Round Agreements, may have increased the frequency of import surges especially in developing countries. However, it is important to note that tariff reductions are usually gradual, and therefore may not logically be expected to result in abrupt and large surges of imports. Likewise, commitment to bilateral and regional trading arrangements with more competitive partners and neighbours can lead to import surge.[4]

3.2.4 Appreciation or revaluation of the currency

Appreciation or sometimes overvaluation of the currency makes imported products cheaper and affordable to domestic consumers and may, therefore, lead to import surges. Currency appreciation erodes tariff protection through specific import tariffs, thereby creating incentives to import.

Measures that apply at the national border are the most obvious means by which governments can affect the unit costs of imported goods within the domestic economy and consequently the quantities imported. The relevant variable likely to generate an import surge is the price of the domestic currency. Rapid revaluation of the domestic currency is one of the most important sources of import surges. A recent example of such revaluation is the strengthening of the South African Rand and the tied currencies of Lesotho, Namibia and Swaziland. Between January 2002 and December 2004 the Rand more than doubled against the United States Dollar and currencies tied to the Dollar, including the Chinese Yuan.[5] This, *inter alia*, has led to a flood of textile and clothing imports from China as the revaluation has halved their Rand CIF price. It should be noted that a currency devaluation by a country's important trading partner acts the same way as the revaluation of country's own currency and can also be a source of an import surge.

3.2.5 Opening to foreign direct investment

Investments leading to increases in the number of supermarkets, tourist hotels or means of transport into the country change the patterns of food procurement and increase imports in several countries. Other types of investments on infrastructures linked to food trade such as construction of more storage facilities in port areas may also encourage higher levels of imports.

3.2.6 Other demand shocks

Sudden changes in consumer preference and animal and plant diseases may shift import demand. Changes in consumer preference, induced, for instance, by population increase or economic boom are not usually abrupt as they do not occur overnight, and are therefore unlikely to lead to a sudden increase in import. But preference changes due to spread of animal or plant diseases may happen fast and trigger a surge in import demand. An example is the case of avian influenza (AI) which in 2004-2006 severely curtailed poultry consumption in many affected countries, thus, lowering international poultry meat prices, changing trade patterns and causing import surges of chicken in other countries. Outbreak of diseases in one type of animal may also prompt the demand in import for

[2] The main aim was protection from South Africa, but the import restrictions applied to all countries and, for example, in the case of Namibia also protected farmers from imports of maize from Zambia.

[3] This has been the practice in Swaziland.

[4] Oxfam (2004) discusses some of the implications of free trade agreement on rice farmers.

[5] In January 2002, one Yuan purchased 1.405 South African Rand. By December 2002, the rate was 1.081 and by December 2004 it had fallen to 0.692.

other product substitutes. For instance, the decline in poultry meat demand because of the AI pandemic may have increased the import demand for bovine meat.

Large national or international gatherings (sporting, political and social events) that draw many foreigners into a country may also prompt import surges as the domestic supply cannot keep up with the temporary but sharp increase in consumption. However, such an increase in import may have been long anticipated prior to the event and the increase in demand may not appear as a shock in the market.

3.2.7 Other domestic causes

Changing and rising costs of inputs or energy affecting the cost structures of domestic industries may lead to import surges. Breach of security in the frontiers especially during wartimes may also lead to an import surge. For developing countries with a porous border, undocumented and illicit imports, and underinvoicing or undeclared imports often occur and may encourage the surges in agricultural imports. A sudden increase in export demand of a product may also prompt the imports of one of the inputs used to make the export products.

3.3 Potential external causes

3.3.1 Export subsidies

Export subsidies lower international prices, make import attractive and may lead to import surges. But export subsidies often criticized for their alleged role in the onset of import surges account for only a fraction of the value of global trade and may be phased out completely in the near future if the talks on the WTO Doha Development Round reach an agreement. The incidence of export subsidies in agriculture is continuously declining since their peak in the 1980s before the conclusion and implementation of the Uruguay Round which limited the use of export subsidies effectively for the first time as the figures on developed countries' subsidies in Annex 3.1 show. This suggests that the importance of export subsidies in explaining the occurrence of import surges may be overestimated.[6] However, where export subsidies are relatively high (butter, skim milk powder [SMP], cheese and other milk products), they depress world prices and may channel trade flows to countries with low market protection.

3.3.2 Export credits

Export credits have been mostly granted for exports to Organisation for Economic Co-operation and Development (OECD) destinations, and were therefore unlikely to cause import surges in developing countries in the past. Still, changes in policies may these effects. In the period 1995 to 1998 almost 60 percent of export credits were received by OECD countries, whereas only 9 percent were received by Net Food Importing Developing Countries and 0.2 percent was received by Least Developed Countries (LDC) (OECD, 2002).

Data on export credits remain scarce as they are not subject to any notification requirements in WTO. Therefore, the latest figures available stem from OECD (2000) calculations for members of the Export Credit Arrangement. In addition to the total export credits granted, the OECD study assesses the subsidy elements within these export credits from the various relevant credit parameters, e.g. interest rates, terms, fees and payment modalities. Some of these results are summarized in Table 3.1.

In addition, the subsidy component of export credits is limited. If conditions of public or publicly financed export credits are more favourable than those which would prevail under market conditions, they have an effect which is similar to that of export subsidies. Such favourable conditions consist of reduced long-term interest rates and this implies that a high amount of export credits could play a role in the emergence of agricultural import surges. But actual figures (Table 3.1) show the low amount of total subsidy elements in export credits and suggest that their relevance in the emergence of import surges to be even smaller than that of export subsidies. Table 3.1 shows that Australia, Canada, the European Union and the United States are the major providers of export credits and accounted for more than 99 percent of total export credits in 1998. In terms of subsidy elements within export credits, the United States accounted for a share of 86 percent in 1998. Although subsidy

[6] See Ashraf, et al. (2005) for deeper analysis.

TABLE 3.1
Agricultural exports, export credits and subsidy elements within these export credits compared with export subsidies, 1998

	Ag. exports	Export credits	Subsidy shares of export credits (SSEC)			Export subsidies (ES)		SSEC/ES
	..... million USD.....			% of ex. cr.	% of ex.	million USD	% of ex.	%
Australia	10 501	1 553	5.1	0.3	0.0	1	0.0	510.0
Canada	17 555	1 108	13.6	1.2	0.1	0	0.0	
European Union	57 028	1 254	23.8	1.9	0.0	5 968	10.5	0.4
United States	57 395	3 929	258.0	6.6	0.4	147	0.3	175.5
Others	9 749	65	0.1	0.2	0.0	89	0.9	0.1
Total	**152 228**	**7 909**	**300.6**	**3.6**	**0.2**	**6 205**	**4.1**	**4.8**

Sources: OECD (2000), Grethe and Nolte (2005).

elements in export credits play a more important role than direct export subsidies for some countries such as Australia, Canada and the United States, their worldwide total in 1998 was far below total export subsidies granted in that year as well as export subsidies granted since then. That export credit was an unlikely source of import surge for many developing countries in the past does not guarantee that it will remain that away as agricultural export policies change.. As the effect of subsidized export credits is similar to export subsidies, they are under discussion in WTO. In this regard, the August 2004 agreement on a framework for modalities provides a rough approach to distinguish between "green" and "prohibited" export credits.

3.3.3 Domestic supports

Aside from the direct effects of export subsidies and credits, other policy measures, particularly the domestic income and price supports, can affect net exports and world market prices. Domestic supports may contribute, depending upon the extent to which they are coupled to production, to higher output levels and surpluses that have impacts on world markets, thus lowering world market prices and affecting long-run conditions of competition for industries in other countries. In any case the surpluses in the world market may trigger import surge in the importing countries.[7]

3.3.4 Food aid

Food aid has played important role in emergency food supply response for many developing countries but the amount of food aid varies over the years (see Box 3.1). One way to examine how food aid could have an impact on import surges is whether or not food aid is included in the definition of imports for the analysis of import surges. If food aid is included in the definition, the mechanism is straightforward: a situation with suddenly increasing food aid, for example, emergency aid, would easily establish an import surge. If only commercial imports are taken into account, food aid may still have an impact because it can be seen as substitute to commercial

[7] Example on dairy is discussed in Oxfam (2002).

[8] For a discussion of the "additionality" of food aid see FAO (2002, 2005).

imports; the elimination or reduction of food aid can therefore result in an increase in commercial imports, which could establish an import surge.[8]

The timing, targeting and the distribution of food aid are important to avoid longer-term adverse impacts on competing domestic industries. International food aid includes various forms of providing food commodities among countries free-of-charge or under highly generous terms. The motivation for food aid in the donor country is often twofold: development objectives for the receivers and an outlet for surplus production for the donors. Due to the ambiguity of distinguishing clearly between food aid and commercial export interests, international rules on food aid have been part of various international agreements like the Uruguay Round AoA, the Food Aid Convention, and the FAO Principles of Surplus Disposal.

3.3.5 Changes in policies of state trading enterprises (STE)

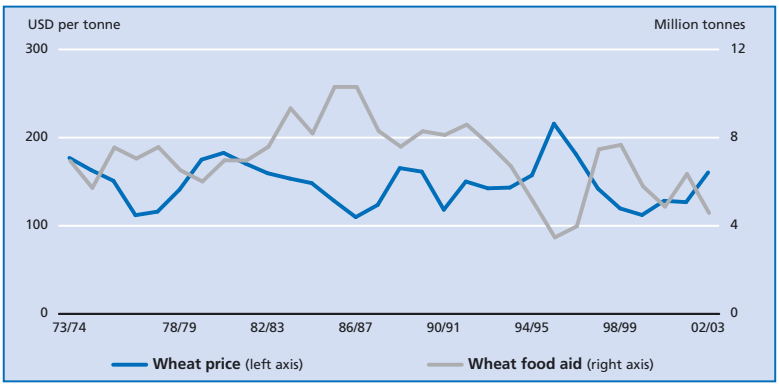
In some countries, external trade is controlled by state trading enterprises (STE) which either have the monopoly to export and import certain products themselves or are able to control external trade by issuing import and export licenses. Rationale behind the installation of such agencies by governments are manifold. They can for instance be intended to use their monopoly power to attract the producer surplus of exporting farmers or to secure the supply of basic

Box 3.1
Food aid (1970-2003)

Total food aid varied considerably between 1970 and 2003 with a peak of almost 17 million tonnes in 1992 and a minimum of about 6 million tonnes in 1973 and 1996. Cereals account for more than 90 percent of total food aid, with the United States granting a 40 to 60 percent share of the total.

The ambiguity in the motivation of food aid results in non-optimal targeting with respect to development issues. An example for this is the high prevalence of food aid in periods of low world market prices as shown in the case of wheat. This is because of the higher domestic market pressure in the donor countries and the lower opportunity cost of food aid in such a situation in contrast with the needs of the food aid receiving countries, which are relatively more in need when world market prices are high. The countercyclical pattern of the international price level and food aid is presented in the following figure for wheat.

Wheat food aid and international wheat price (1973/74-2002/03)



Sources: FAO (2005), OECD (2004), Grethe and Nolte (2005).

Box 3.2
Liberalization of rice export in India

In 2002, India announced a new export/import policy for the next five-year period. This new policy included the lifting of the quantitative export restrictions and lowering of the minimum export price for certain types of rice in order to reduce public stocks (FAO, 2003). The new policy led to an increase of Indian rice exports from around 2 million tonnes to around 5 million tonnes in 2002 and 3.5 million tonnes in 2003 (FAO, 2005a). The repartition of rice imports from India is shown in the following table. In absolute terms most of these additional imports as a result of the policy changes went to Asian countries as can be seen in the following table. In particular this policy change contributed to an import surge in Bangladesh, where imports from India rose from 0.3 million tonnes in 2000 to 0.9 million tonnes in 2002. Large relative increases in imports also took place in some African countries. In most cases listed, the increase in imports came with either significant declines in import unit values or persistently low levels in previous years, generally below USD 200 per tonne, in some cases even below USD 150[9] (ITC, 2005).

It is important to note that some countries had already faced large amounts of imports of Indian rice in 1998, especially Bangladesh. This corresponds to a peak in Indian exports of rice in 1998 which had already risen to almost 5 million tonnes from a level of 2.0-2.5 million tonnes in the previous years and decreased again in the following years. Unit values of Indian exports in 1998 do, however, not show a serious decline.

Rice imports from India 1998-2002

	1998	1999	2000	2001	2002
Bangladesh	2 333 278	380 738	318 416	102 984	937 239
Indonesia	18 722	1 184	10	142 066	561 945
Malaysia	25 345	301	10 601	52 985	359 601
Philippines	55 394	52	0	153	527 196
Singapore	16 172	16 812	18 692	41 716	102 517
Comoros	1 201	0	22	0	31 151
Djibouti	9 435	10 486	3 457	5 624	21 038
Gabon	0	0	0	0	51 050
Kenya	37 115	13 118	22	12 178	31 750
Madagascar	3 000	0	0	0	22 681
Sudan	9 746	84	2 377	1 704	24 412

Source: USITC (2005).

[9] The exemptions are Gabon and the Philippines with import unit values of USD 239 and USD 295 per tonne, respectively.

food commodities by policies such as stockholding, as has been the case with the Food Corporation of India (see Box 3.2). Sudden changes in the policies of such agencies can have strong effects on world markets and markets of major trading partners, especially if the respective country is a large exporter or importer.

3.3.6 Depreciation, devaluation of the currency

Depreciation or the devaluation of large exporting countries' currencies may have significant effects on the imports of other countries. The depreciation in an exporting country will make that country's exports cheaper and attract importers from its trading partners and lead to import surges.

3.3.7 Concentration of trade and markets

Concentration of exports (or imports) of some food and agricultural products among few countries affects imports (or exports) in other countries. As the level of concentration is far greater among agricultural exporters than among importers, any shock (e.g. policy or weather) from these few exporters can have a strong impact on the world market prices and promote variations in trade levels among many smaller importing countries. But the size of a country's domestic market, regardless of the size of its trade, also plays an important role. Indeed, production or consumption shocks from countries (e.g. China or India) which for some commodities are only marginal traders but are with large domestic markets, may affect the world's import volume and price significantly.

3.3.8 Other market shocks that can result in sharp declines in commodity prices

Agricultural production is inherently variable due to climatic and other factors affecting annual outputs. Variations in output in major importing or exporting countries were a primary cause of fluctuations in world market prices. Bumper crops due to exceptionally favourable production conditions in the exporting countries may lead to large surpluses that affect world market prices and result in import surges in importing countries as mentioned earlier. Similarly, dumping of nearly expired food products also prompts an import surge in some developing countries.[10]

When prices fall, importing countries may expand their purchases to take advantage of the low price, thereby encouraging an import surge. Rapid innovation in production and marketing technologies as well as changes in factor endowments, induced by, for instance, government intervention, can result in rapidly rising export supplies.

3.4 Concluding remarks: interaction of the various causes

The interaction among the contributing factors to import surges often brings about outcomes that are different from the effect of each individual factor. What is important when such interaction occurs is to examine what source is most influential in creating an import surge. Such a combination and interaction always occurs as the timing of the involvement of each policy is often difficult to assess and that some factors may not be separated from others.

An example is a small economy reducing its import tariff and producing a more skilled workforce for more skilled-intensive exports. Because of the country's orientation towards the export of skilled-intensive products, the ratio of the wage of the skilled to that of less skilled workers may decrease because an educated workforce will stay away from sectors that use unskilled labour (sector like agriculture). The increase in labour costs in sectors that use unskilled labour combined with the measures to reduce tariff and accumulate technology may weaken the competitiveness of the import competing sector and prompt an increase in import. In this case the interaction and combination of education, tariff reduction and technology have generated an increase in import. Whether the increase in import in such a circumstance is qualified as a surge is another question, but what is important in this example is that the determination of the main source of an import surge is difficult and requires careful analysis of the sequence and combination of events happening prior to the surge. This disentangling of the causes of import surges is important in evaluating the main sources of the injuries and consequence of the surge and will also be discussed in the next chapter.

[10] See Oxfam, 2003.

APPENDIX 3.1
AGRICULTURAL SUBSIDIES, THE URUGUAY ROUND AND IMPORT SURGES

The following table presents export subsidy bindings agreed upon in the Uruguay Round as well as since for the implementation period.

In 2002 worldwide expenditures for export subsidies were at USD 3.1 billion, which is only about 24 percent of the current WTO limit and 13 percent of the Uruguay Round base period. Export subsidies have mainly been a phenomenon in European Union agricultural policy, during the base period for reduction commitments and even more so since that period. The European Union accounts for 71 percent of current export subsidy bindings and about 90 percent of export subsidies paid in 2002 worldwide.

TABLE A.3.1
Percentage shares of selected countries in total value of agricultural export subsidies (WTO limit and annual expenditures)

	WTO limit		Expenditures		
	Uruguay Round base	2004	1995	1998	2002*
Total (million USD)	23 003	13 065	7 712	6 641	3 092
European Union		70.9	88.5	87.9	89.8
United States		4.5	0.4	2.2	1.0
Switzerland		2.7	6.3	4.4	6.2
Others		21.8	4.9	5.5	3.0

* Notifications for all countries were not yet available. Among those countries where no notification had been submitted, only Switzerland and South Africa had applied export subsidies in the previous year. Expenditures of these countries are therefore based on 2001 data.
Sources: Grethe and Nolte (2005).

References

Ashraf, N., McMillan, M. & Zwane, A.P. 2005. My policies or yours: Have OECD agricultural policies affected incomes in developing countries? NBER Working Paper Series, Number 11289, April 2005. www.nber.org/papers/w11289.

De Nigris, M. 2005. Defining and Quantifying the Extent of import surge: Data and Methodologies. FAO Import Surge Working Paper No. 2, FAO, Rome, May 2005.

FAO. 2002. Food aid in the context of the WTO negotiations on agriculture. In: FAO Papers on Selected Issues Relating to the WTO Negotiations on Agriculture. FAO, Rome.

FAO. 2005. Food aid in the context of international and domestic markets and the Doha Round. FAO Trade Policy Technical Notes on Issues Related to the WTO Negotiations on Agriculture. No. 8.

Grethe, H. & Nolte, S. 2005. "Agricultural Import Surges in Developing Countries: Exogenous Factors in their Emergences." FAO Import Surge Working Paper No. 5, FAO, Rome, May 2005.

OECD. 2000. An analysis of officially supported export credits in agriculture. Document COM/AGR/TD/WP(2000)91/Final, 20.12.2000.

OECD. 2001. Decoupling: a Conceptual Overview. Paris.

OECD. 2002. Agriculture and Trade Liberalization. Extending the Uruguay Round Agreement.

OECD. 2004. 2004 OECD Agricultural Outlook Tables, 1970-2013. http://www.oecd.org/dataoecd/55/44/32980897.xls.

OXFAM. 2002. Milking the CAP – how Europe's dairy regime is devastating livelihoods in the developing world. OXFAM Briefing Paper No. 34, December 2002.

OXFAM. 2003. Dumping without borders: how US agricultural policies are destroying the livelihoods of Mexican maize farmers. OXFAM Briefing Paper No. 50, August 2003.

OXFAM. 2004. A raw deal for rice under DR-CAFTA: How the Free Trade Agreement threatens the livelihoods of Central American farmers, OXFAM Briefing Paper No. 68, November 2004.

United States International Trade Commission (USITC). 2005.

CONSEQUENCES OF IMPORT SURGES

4

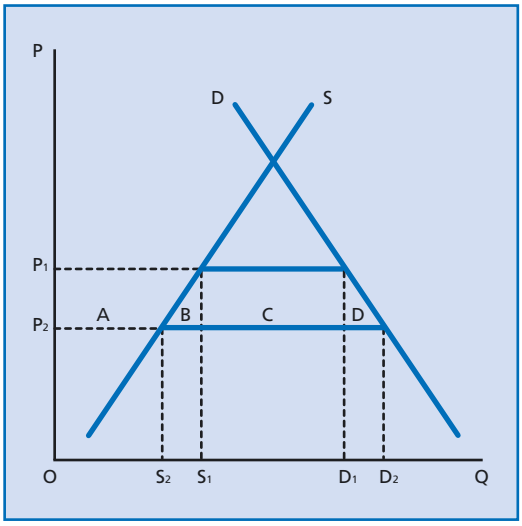
4.1 Assessment issues

Import surge can be viewed as a potential disturbance or a shock on the price and production for the import competing sector (commodity) but assessing its consequences poses a number of challenges for many reasons. First, the impacts of the surge may extend to other sectors, and may also last for an indefinite period of time. Second, causes other than import surge may lead to the same consequences and it remains difficult to determine the surge's share of responsibility. Third, the WTO legal framework often refers to injuries as the consequence of the import surges and to provide justification for some safeguards, but it lacks the specifics on whose injury the investigation should focus on. The term injury usually refers to income or profit losses for producers but some consumers who have marked preference for the domestically produced commodity may also feel injured by the collapse of the import competing sector. These difficulties indicate that the determination of the full impact of the import surge remains a daunting task and has to be confined to specific tangible indicators. This chapter attempts to show how the consequence of, i.e. both the loss and benefits from an import surge, can be identified and assessed.

4.2 Import surge in a small open economy and major consequences

Figure 4.1 illustrates the impact of import surge on a small but open country. The small open country is a price taker and cannot affect the world price P_1. At that price the country's producers supply an amount

FIGURE 4.1
Import surge for a small open country



OS_1 while an amount S_1D_1 is imported to satisfy consumer demand at that price. Following an event, for example, a bumper crop in a large exporting country, the world price will fall from P_1 to P_2 as these foreign producers have to lower the price to get rid of the excess supply and consumers pay less for more food. The fall in price takes effect in the small country because it is an open economy, and at the new prevailing price P_2, the local producers, because of their cost constraints and low incentives due to the low price, produce only an amount OS_2 while its consumers demand more of the cheaper products

and increase consumption by D_1D_2 which comes from imports. Total import now amounts to S_2D_2 which is larger than the amount S_1D_1 imported before. The immediate consequences are the following: loss for producers (loss of the area A, gain for consumers: (A+B+C+D). The overall outcome is a gain for the importing country. Import surge cannot always be seen as a loss alone because a loss to producers is a gain for consumers.

But such a simplified explanation hides other costs and benefits involved when import surge occurs. Costs may include various items such as unemployment costs (compensations to be paid, loss of investment in skills); volatility risks from the price shocks; and coverage of fixed costs when the domestic sector goes out of business. On the other hand, the gain may include the spillover effects on research and development (R&D) from the increased imports, the increase in product choices for consumers. These unaccounted costs and benefits are difficult to measure without appropriate data. Moreover, as a surge is supposed to be short-lived, the price and quantity may shift back close to their levels prior to the shock and such shifts may be associated with a different set of costs and benefits for the stakeholders. For the rest of this chapter, these theoretical considerations serve as a basis for the examination of the consequences of import surge.

4.3 Legal World Trade Organization (WTO) concepts of injury and threat of injury

In this section, the focus is on the injuries, i.e. the negative effects of the surge, inflicted to the producers and other actors in the sector. There are five concepts of injuries in the trade remedy measures:

- serious injury;
- threat of serious injury;
- material injury;
- threat of material injury;
- material retardation.

The first two are used in the ASG and the last three in the AD and Subsidies and Countervailing Measures (SCM) Agreements.

Article 4 of the ASG ("Determination of serious injury or threat thereof") defines the concept as follows (Article 4.1):

(a) "*serious injury*" shall be understood to mean a significant overall impairment in the position of a domestic industry;
(b) "*threat of serious injury*" shall be understood to mean serious injury that is clearly imminent, in accordance with the provisions of paragraph 2 of the same article. A determination of the existence of a threat of serious injury shall be based on facts and not merely on allegation, conjecture or remote possibility.

Paragraph 2 (a) of Article 4.1 requires competent authorities to evaluate all relevant factors of an objective and quantifiable nature having a bearing on the situation of that industry, in particular:

- rate and amount of the increase in imports of the product concerned in absolute and relative terms;
- share of the domestic market taken by increased imports;
- changes in the level of sales, production, productivity, capacity utilization, profits and losses and employment.

Paragraph 2 (b) of the same Article further puts a condition that the aforementioned determination shall not be made unless it is demonstrated that there exists a causal link between increased imports and serious injury or threat thereof. The next paragraph of the Article states the non-attribution requirement, i.e. it is also required that when factors other than increased imports are causing injury to the domestic industry at the same time, such injury shall not be attributed to increased imports.

4.3.1 Serious injury

Like GATT Article XIX and the ASG, ABs have not attempted to define "serious injury" with any precision. The focus of the AB has been primarily on the text of Article 4.2, i.e. evaluation of all relevant factors including the three factors mentioned as being "in particular". The AB has stated that the text requires that all of the listed factors be "evaluated" in every case, and it has

found safeguard measures under WTO law whenever a member failed to discuss one or more of these factors in its official report on safeguard action.

The AB has also indicated that the obligation to evaluate "all relevant factors" may extend to factors not raised by any of the parties to the safeguards investigation (e.g. in United States–Wheat gluten). The AB insisted that serious injury represents "significant overall impairment" but it has often refrained from giving detailed commentary on the reasoning behind findings of "serious injury" by national authorities. One notable exception is the case of United States–Lamb. In this case, the USITC had found lamb prices in the United States to be "depressed" even though they were generally higher than four or five years earlier. It had also found a threat of serious injury even though prices had risen toward the end of the period of investigation. The AB held that these findings were insufficient to support the USITC determination.

Nevertheless, while examination of all relevant factors is needed, it is not necessary that every "relevant factor" reflects an industrial decline. Thus, on the whole, the AB has provided relatively little guidance on the meaning of "serious injury," a situation that is perhaps understandable given the vagueness of the pertinent textual obligations. Beyond a requirement that all factors listed in the Safeguards Agreement (SA) be "evaluated" in each case, it remains unclear what conditions will support a finding of serious injury or threat, and what degree of deference on the matter will be afforded to national authorities.

4.3.2 Threat of serious injury

Here also, the ASG itself contains no explicit guidance on any specific methodology that a competent national authority must employ when establishing threat of serious injury. The relevant factors to take into account are the same as for serious injury, in ASG Article 4.2(a). However, in this case, the key word is "imminent", or "impending" or "soon to happen". In the United States–Lamb case, the Panel itself drew some inferences on how to conduct a threat analysis, as follows:

(i) the determination of a 'threat' needs to be based on an analysis of objective and verifiable data from the recent past;

(ii) the recent past data need to be complemented by fact-based projections concerning developments in the industry's condition, and concerning imports, in the imminent future;

(iii) the analysis needs to determine whether injury of a serious degree will actually occur in the near future unless safeguard action is taken.

Thus, the key distinguishing aspect of a "threat" of injury, in contrast to only "injury" or current injury, is the almost exclusive reference to future developments in imports (i.e. future-oriented considerations). In Argentina–Footwear, the Panel held that an analysis of the threat of serious injury in the safeguards context is a separate matter from an analysis of actual serious injury, and so such an analysis must be explicitly undertaken. In United States–Lamb, for example, the USITC did not find present serious injury – "... we found that the United States-Lamb industry is not currently experiencing serious injury, but rather is threatened with serious injury." The complainants (Australia and New Zealand) had argued that the USITC's analysis of threat of serious injury is flawed because it was not "prospective", i.e. it was rather based on past data, and should instead have been based on projections as to how the industry was likely to perform in the immediate future.

4.3.3 Material injury and threat of material injury

These concepts are used in the Subsidies and Countervailing Measures (SCM) and AD agreements. In SCM Article 15.7, for establishing a threat of material injury, it is essential that the change in circumstances which would create a situation in which the subsidy would cause injury must be clearly foreseen and imminent. In determining the existence of a threat of material injury, the investigating authorities should consider, *inter alia*, such factors as:[1]

(i) nature of the subsidy or subsidies in question and the likely trade effects;

[1] The following list is identical to that in the AD Agreement (Article 3.7) except that (i) is not relevant to AD.

(ii) a significant rate of increase of subsidized imports into the domestic market indicating the likelihood of substantially increased importation;
(iii) sufficient freely disposable, or an imminent, substantial increase in, capacity of the exporter indicating the likelihood of an increased subsidized exports to the importing member's market, taking into account the availability of other export markets to absorb any additional exports;
(iv) whether imports are entering at prices that will have a significant depressing or suppressing effect on domestic prices, and would likely increase demand for further imports; and
(v) inventories of the product being investigated (with the exporter).

It is also said that no single factor by itself can necessarily give decisive guidance but the totality of the factors considered must lead to the conclusion that further subsidized exports are imminent and that, unless protective action is taken, material injury would occur. Thus, the determination of the ultimate judgement is left to a panel or the AB.

The characterization of injury is similar in the AD Agreement. In Article 3.4, it is said that the examination of the impact of the dumped imports on the domestic industry concerned shall include an evaluation of all relevant economic factors and indices having a bearing on the state of the industry, including:

- actual and potential decline in sales, profits, output, market share, productivity, return on investments, or utilization of capacity;
- factors affecting domestic prices;
- the magnitude of the margin of dumping;
- actual and potential negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital or investments.

It is said that this list is not exhaustive, nor can one or several of these factors necessarily give decisive guidance.

4.4 A standard analytical approach to an injury investigation

There is nothing unique about the approach and methods that ought to be used for investigating the impact of import surges. In a way, this analysis is not much different from the vast number of studies in the literature on the socio-economic impact of policy changes. What distinguishes an investigation on import surges from others is that the causal factor or the source of the impact in this case is the surge, rather than, for example, a change in some border or domestic policy (e.g. tariff), or a shock like a spike in the price of oil. In this sense, there is much to learn and draw upon from the approaches followed in other studies.

One strand of literature from which there is much to learn and borrow for the surge case studies is the burgeoning literature on the impact of trade liberalization on markets, poverty and food security. These are mostly model-based assessments of the impact of trade policy changes, in recent years mainly focused on the WTO Agreements. Most of these model-based studies are *ex ante* in nature, i.e. models are constructed and a number of "what-if" type simulations are run to assess the impacts. These can be partial equilibrium or general equilibrium models.

But *ex post* studies are much more complicated in this case because here one needs to separate the impact of the policy measure being investigated (e.g. tariff, import surge) from other sources of change (e.g. weather, exchange rate). There is no easier way as it is exceedingly difficult to isolate the effect of one or more causal factors in observed impact indicators. Besides this distinction between *ex ante* and *ex post* approaches, the other distinguishing characteristic of these studies is the level at which the impacts are assessed. Perhaps a majority of these studies has focused on the impact at the level of market or country (e.g. what is the impact of a surge on domestic price level or production or consumption). However, there is now a growing literature on these studies that goes beyond the level of the market to assessing impacts at the level of households, e.g. rural poor versus urban poor, small versus large farmers, and so on. The availability of large-scale survey data, notably the Living Standards Measurement Surveys, has made this extension possible. Other studies have supplemented this analysis by bringing in a spatial dimension (e.g. various rural areas in a country) and the issue of whether markets are spatially integrated or segmented. Therefore, analytical methods for the new import surge case studies can be enriched considerably by borrowing and learning from this strand of literature.

In the WTO context of the issues of import surges, it would make sense to follow the approach taken in the investigation of the WTO trade remedy measures for the purpose of disputes. But the SSG of the AoA does not require injury tests, and therefore, this framework is not relevant for a study whose focus is on the impact of a surge. Moreover, investigations on the three WTO general trade remedy measures (i.e. AD, countervailing and emergency safeguards) require an injury test and so the approach taken and analytical standards set in these agreements are more relevant for the surge case studies. Of the three, the SA is most relevant because there is no need or requirement to relate surges to dumping or export subsidies. The standards set in the SA are high. Perhaps they are too high, because not a single safeguard measure taken by members since 1995 has been found to be consistent with the agreement. Nevertheless, this is the standard that one may strive to meet to the extent possible.

At the cost of simplification, a thorough investigation of a safeguard case involves the following four elements, i.e. the case has to be justified for each stage.[2]

- surge – a proof that a surge has occurred and is occurring;
- injury – the domestic industry (properly defined) is injured on the basis of several indicators listed in the SA (as well as other indicators as relevant);
- causation – there has to be a causal link between imports and injury; and
- non-attribution – the injury caused by other factors (other than imports) have to be properly identified and accounted for.

Although it is obviously a daunting task to go through all these stages and to justify a safeguard measure,[3] these requirements make good sense, both from the logical and economic standpoints. For example, there has to be above all a surge, otherwise imports cannot be the cause of the injury. Second, there has to be injury because a surge may or may not cause an injury, if there is no injury, the entire rationale of undertaking the investigation is lost. Third and fourth, imports have to be the cause of the injury, either on their own or in combination with other factors. Moreover, it needs to be demonstrated that the role played by other factors in causing or contributing to the injury is properly identified and the problems caused by other factors are not attributed to imports.

On causation particularly, it is important to check the causation between the injury, i.e. the indicators and the import surge. This requires a correlation analysis to identify the relationship between the movements in imports (volume and market share, etc.) and the movements in injury factors (e.g. sales, production, productivity, capacity utilization, profits and losses and employment). Additional insights and analyses are needed to determine whether the conditions of competition between the imported and domestic product as analysed demonstrate the existence of the causal link between the imports and any injury. Even in the absence of the expected negative correlation, the case needs not be dismissed but more and stronger evidence must be produced to argue why imports have caused injury despite the positive correlation.

4.5 Determining which product is really affected: product eligibility, like and competitive products

Safeguards disputes require a definition of "like" or "competitive products" in order to establish the relationship with imports and thus to define the domestic industry that is affected by the import of such "like" or "competitive products." The concept of "like" or "competitive products" is found in all trade remedy agreements and in GATT, especially in Article III on national treatment. The key concepts are as follows (Figure 4.2):

- like products;
- directly competitive products;
- directly competitive or substitutable products.

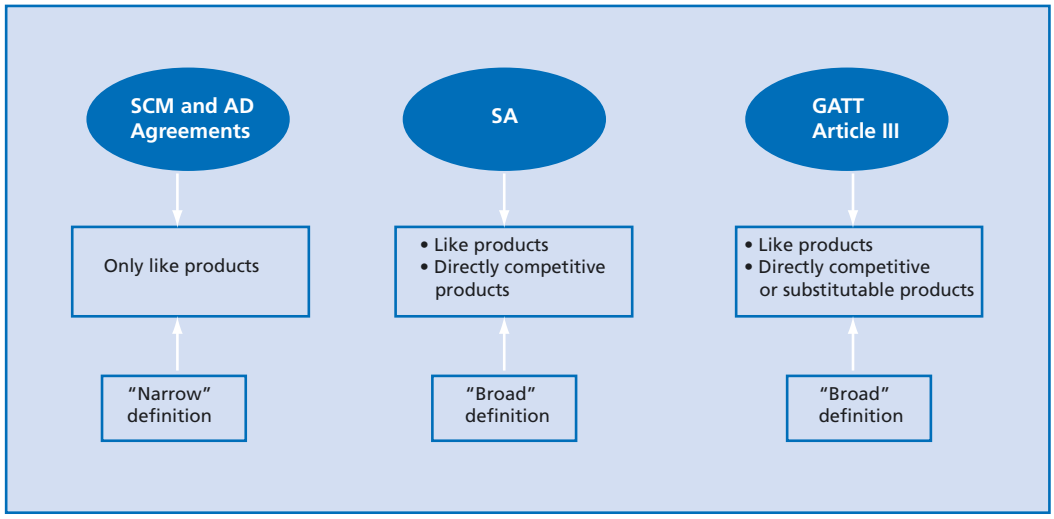
4.5.1 Like products

Although this term appears 16 times in GATT 1994 itself, it is deliberately not formally defined. According

[2] See Mosoti and Sharma (2005) for details on the approach taken in a typical Safeguards investigation.

[3] Note that in contrast, the SSG (and most probably the SSM) is required to pass only the first test.

FIGURE 4.2
Like, competitive and substitutable products in GATT/WTO legal texts



Source Mosoti and Sharma (2005)

to GATT Analytical Index, lengthy discussions have taken place in GATT since 1947, including in working parties, to determine the desirability of a formal definition. This was never done. The 1970 Report of the Working Party on Border Tax Adjustments set out the basic approach for interpreting "like or similar products" generally in the various provisions of the GATT 1947. It stated that an assessment of "likeness" should be conducted on a case-by-case basis:

> The interpretation of the term should be examined on a case-by-case basis. This would allow a fair assessment in each case of the different elements that constitute a "similar" product. Some criteria were suggested for determining, on a case-by-case basis, whether a product is "similar": the product's end-uses in a given market; consumers' tastes and habits, which change from country to country; the product's properties, nature and quality.[4]

The case-by-case basis interpretation, which would allow a fair assessment in each case of the different elements that constitute a "similar" product, was followed in almost all panel reports subsequent to the Border Tax Adjustments report.

The SG does not define the term, nor is the phrase "directly competitive" defined. The AD and SCM Agreements, however, define like products formally and identically, as follows:

> Throughout this Agreement the term "like product" shall be interpreted to mean a product which is identical, i.e. alike in all respects 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.[5]

Under GATT, the determination of whether two items are "like products" is often analysed under two distinct frameworks: the Border Tax Adjustments Test

[4] Report of the Working Party on Border Tax Adjustments, BISD 18S/97.

[5] SCM Agreement Article 15, foot note 46; and Para 2.6 of AD Agreement.

("BTA") and the "Aim and Effect" test. The former approach has been followed and developed by many panels and ABs. The BTA framework consists of the following criteria:

- the properties, nature and quality of the products;
- the end-uses of the products;
- consumers' tastes and habits; and
- the tariff classification of the products.

However, the AB has cautioned that these criteria are to be applied on a case-by-case basis, and are "neither treaty mandated nor a closed list." In Japan–Alcoholic Beverages II, the AB emphasized that: "... there can be no one precise and absolute definition of what is "like". The concept of "likeness" is a relative one that evokes the image of an accordion. The accordion of "likeness" stretches and squeezes in different places as different provisions of the WTO Agreement are applied." Most panels have focused on the more objectively ascertainable criteria of product properties, end-uses and tariff classifications, and less so on the more subjective criteria of consumer habits.

Some clarification was made in the European Union–Asbestos case, in which the AB concluded that the greater the similarities of two products in the marketplace, the higher the probability that they will be deemed "like products." As market competitiveness and substitutability are most reflected in the end-uses and consumer tastes criteria, the AB found that market substitutability is a necessary and sufficient condition for finding likeness.

This concept has also been discussed in a number of recent cases involving agricultural products. In the United States–Lamb case, the Panel concluded that live lamb cannot be a like product of the imported lamb, in view of different physical characteristics and other considerations. In Canada–Beef, an identical argument was made, that cattle cannot be a like product to imported beef. Similarly, in United States–Wine and Grapes, it was held that grapes cannot be a like product to wine. In Chile–Agricultural Products, domestic rapeseed was not said to be the like product of imported vegetable oils, and in Korea–Dairy, domestic fresh milk was held not to be a like product of imported milk powder.

4.5.2 Directly competitive products

It is puzzling why the interpretation of the phrase "directly competitive products" in ASG Article 4.1(c) has not been addressed by any panel to date. Indeed, GATT Article III is the only context in which the concept of directly competitive products has been addressed in GATT/WTO dispute settlement practice. For example, in United States–Lamb, the Panel did not get into the issue of directly competitive products because the USITC did not do so, limiting the arguments to like products only in defining domestic industry. Although two of the USITC Commissioners had stated their view that domestically produced live sheep were "directly competitive" with imported lamb meat, the USITC did not rely on this concept, and so the Panel did not get into the matter.

4.5.3 Directly competitive or substitutable products in GATT Article III

The phrase "directly competitive or substitutable products" is found not in trade remedy agreements but in GATT 1994 Article III:2, in the context of national treatment. GATT Article III:2 is concerned with two different factual situations: Article III:2, first sentence, is concerned with the treatment of like products, whereas Article III:2, second sentence, is concerned with the treatment of directly competitive or substitutable products, meaning, products other than like products. Article III:2 further clarifies the distinction between these two sets of products, and hence two distinct obligations in Article III:2.

Many disputes involving this phrase have taken place in the context of differential domestic taxes on alcoholic products. For example in Japan–Alcoholic Beverages, the question asked was whether various imported products (like whisky, brandy, gin, rum and liqueurs) are directly competitive or substitutable with sochu, the Japanese product. Similar investigations were conducted: in Korea–Alcoholic Beverages, imported western alcoholic beverages versus the Korean soju; and in the Chile-Alcoholic Beverages case, imported western alcoholic beverages versus the Chilean pisco.

The Panels have always held that directly competitive or substitutable products should be interpreted more broadly than the term "like products". In all three

disputes, the Panels went through in depth evidence on elasticity of substitution, and held that these elasticities are valuable and should be examined as part of the evidence. In the Japan-Alcoholic Beverages case, the Panel concluded that imported liquors were directly competitive or substitutable with shochu, for the following reasons:

- the products concerned are all distilled spirits;
- the previous GATT case of 1987, Japan–Alcohol Panel report had made similar findings;
- the evidence demonstrates that there is a "significant elasticity of substitution" among the products; and
- there is evidence that whisky and shochu are "essentially competing for the same market."

Also relevant for agricultural products is the EEC-Animal Feed Proteins case of 1978. The issue was whether the EEC measure that favoured the use of domestic denatured SMP as a protein source for use in animal feedstuff came at the cost of other protein feedstuffs. The Panel concluded that other protein products in dispute could not be considered as like products with denatured SMP because the basic characteristics are very different. However, both parties to the dispute had agreed that most products in question were substitutable under certain conditions. It was also noted that 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. In the case, the Panel found that the EEC measure in question did tilt the demand in favour of milk powder and, by virtue of this measure, made the product directly competitive with other protein feeds.

4.5.4 Mapping the industry/sector

Mapping is a valuable tool for understanding the points of market competition between products and its nature. It also helps identify market segments for the purpose of competition analysis.

4.6 Non-attribution analysis

The non-attribution analysis is to ensure that all other relevant factors have been analysed and to establish that injury caused by factors other than imports has not been attributed to imports. This analysis is part of the "causation" analysis, which implies an understanding of all other relevant factors potentially implicit in injury issues and the determination that injury caused by factors other than imports has not been attributed to imports.

Any analysis of a cause and effect type needs to take into account the effects of other causal factors, so that injury caused by other factors is not wrongly attributed to the causal factor under investigation. Many WTO disputes, or other studies, have failed or have been discredited because a country that put in place a safeguard measure failed to properly undertake the non-attribution analysis. The factors other than imports that could cause injury vary across commodities and countries. Some examples of such factors examined in the WTO disputes include credit constraints, high interest rates, exchange rate overvaluation, overall economic recession, rising labour costs, changing consumer tastes and high export demand that prompts imports of a good as an input into the production of the export products. Once the national analysts develop a good understanding of why and how identified industries may be suffering, these potential causal factors should be evident. These are the underlying factors which potentially underpin the competitiveness of a domestic industry.

4.7 Impact indicators

Impacts can be seen at both micro and macrolevels depending on the severity of the import surge. The indicators may differ by sector (or commodity) and by the nature of the participation of the economic agent along the marketing chain. But a common feature of these impact indicators is that they are all related to the quantity and/or price of the product affected by the surge. When a WTO text often refers to 'injury' from import surge, it is not clear, injury to whom? the import surge may injure some groups of population but may benefit others.

Although the concept of injury and its indicators are widely known to specialists and non-specialists, these are also defined and listed in the WTO trade remedy measures.[6] The Subsidies Agreement in particular defines the concept of serious injury as a significant overall impairment in the position of a

domestic industry. Likewise, a threat of serious injury is understood to mean serious injury that is clearly imminent. The Agreement requires an evaluation of all relevant factors having a bearing on the situation of that industry and goes on to list the following indicators as being particularly required:

- rate and amount of the increase in imports of the product concerned in absolute and relative terms;
- share of the domestic market taken by increased imports;
- changes in:
- the level of sales;
- production;
- productivity;
- capacity utilization;
- profits and losses; and
- employment.

To this list, one may add prices (including wages) as the main indicators. Prices were not directly mentioned but prices are already implicit in most of these aforementioned indicators such as profits and sales. Also, prices alone can be a direct measure of the import surge's impact. The Antidumping Agreement in particular singles out impacts on domestic prices as a key injury indicator. Consequently, the market price is one key variable to be collected and analysed in any economic analysis. It is also noted that at the household level the impact can be examined through income and consumption levels. Similarly the levels as well as the variability (volatility) of all the aforementioned indicators could constitute additional and useful information.

4.8 Measuring the impacts

The challenge is on getting measurements of these impact indicators and on monitoring them. Some of the approaches and tools used to measure the impacts are discussed here.

Characterization of the nature of competition between import and domestic products

First, the nature of competition between imported and domestic products needs to be identified, as well as the manifestation of injury and its indicators. Also, factors, other than imports, that affect the industry, positively or negatively, need to be analysed (the non-attribution analysis). Use of price elasticities of substitution, between the two competing products, will indicate how strongly the two are related: complement, substitute. An econometric approach based on cross-sectional or time series or panel data would be appropriate to estimate these elasticities.

Identifying the domestic sector affected by IS

There is a need to clarify and define what the domestic sector or industry is as defined in the WTO Agreement. According to Article 4.1(c) of the ASG, in determining injury or threat thereof, a "domestic industry" shall be understood to mean "the producers as a whole, of the like or directly competitive products operating within the territory of a member, or those whose collective output of the like or directly competitive products constitutes a major proportion of the total domestic production of those products." Thus, for example, if the product in question is imported milk powder, the corresponding domestic industry would be milk production in the country (in the wider sense of the "competitive product") and "milk processors" (in the sense of narrower "like products").

But this definition is fraught with challenges. In the United States–Lamb case, the AB found that in an investigation in which the relevant "like product" was defined as lamb meat, the term "domestic industry" could not be interpreted as including growers and feeders of live lambs. The AB stated that in determining the scope of the domestic industry, the first step should be the identification of the products which are "like or directly competitive" with the imported product. It further asserted that "only when those products have been identified is it possible then to identify the "producers" of those products."[7]

Hence, in Unites States–Lamb Meat, first the AB considered the definition of "domestic industry" with reference to products:

[6] See Mosoti and Sharma (2005) background paper for details.

[7] United States–Lamb Meat, Appellate Body Report, paragraph 87.

A safeguard measure is imposed on a specific "product", namely, the imported product. The measure may only be imposed if that specific product ("such product") is having the stated effects upon the "domestic industry that produces like or directly competitive products" (emphasis added). The conditions in Article 2.1, therefore, relate in several important respects to specific products. In particular, according to Article 2.1, the legal basis for imposing a safeguard measure exists only when imports of a specific product have prejudicial effects on domestic producers of products that are "like or directly competitive" with that imported product. In our view, it would be a clear departure from the text of Article 2.1 if a safeguard measure could be imposed because of the prejudicial effects that an imported product has on domestic producers of products that are not "like or directly competitive products" in relation to the imported product.[8]

Once the definition of "domestic industry" had been analysed with respect to products, it was then examined with respect to producers as follows:

> As the Panel indicated, "producers" are those who grow or manufacture an article; "producers" are those who bring a thing into existence. This meaning of "producers" is, however, qualified by the second element in the definition of "domestic industry". This element identifies the particular products that must be produced by the domestic "producers" in order to qualify for inclusion in the "domestic industry". According to the clear and express wording of the text of Article 4.1(c), the term "domestic industry" extends solely to the "producers … of the like or directly competitive products" (emphasis added). The definition, therefore, focuses exclusively on the producers of a very specific group of products. Producers of products that are not "like or directly competitive products" do not, according to the text of the treaty, form part of the domestic industry.[9]

Finally, in concluding that the United States were following a definition of "domestic industry" that was too broad, the AB upheld the Panel findings in the following words:

> There is no dispute that in this case the "like product" is "lamb meat", which is the imported product with which the safeguard investigation was concerned. The USITC considered that the "domestic industry" producing the "like product", lamb meat, includes the growers and feeders of live lambs. The term "directly competitive products" is not, however, at issue in this dispute as the USITC did not find that there were any such products in this case. In this respect, we are not persuaded that the words "as a whole" in Article 4.1(c), appearing in the phrase "producers as a whole", offer support to the United States position. These words do not alter the requirement that the "domestic industry" extends only to producers of "like or directly competitive products". The words "as a whole" apply to "producers" and, when read together with the terms "collective output" and "major proportion" which follow, clearly address the number and the representative nature of producers making up the domestic industry. The words "as a whole" do not imply that producers of other products, which are not like or directly competitive with the imported product, can be included in the definition of domestic industry. Like the Panel, we see the words "as a whole" as no more than "a quantitative benchmark for the proportion of producers … which a safeguards investigation has to cover."[10]

According to the AB, the degree of integration of the production process should not impact on the eventual determination of the "domestic industry."[11] The AB also considered the phrase "those whose collective output…constitutes a major proportion" and the question of data coverage as follows:

[8] Idem, para. 86 of the AB report.

[9] Idem, para. 84.of the AB report.

[10] Idem, para. 91 of the AB report.

[11] Idem, para. 94 of the AB report.

"The Agreement expressly envisages that, in certain circumstances, the "domestic industry" may consist of those domestic producers "whose collective output of the like or directly competitive products constitutes a major proportion of the total domestic production of those products". This implies that complete data coverage may not always be possible and is not required. While the fullest possible data coverage is required in order to maximize the accuracy of the investigation, there may be circumstances in a particular case which do not allow an investigating authority to obtain such coverage."

4.9 Price analysis

Measuring the impacts of import surge on prices (including wages) is important as it is still one of the best tangible indicators that inform of the extent of the impact on the economic agent. This section is based on the analysis provided in Westlake (2005). Traditionally economists have analysed the impact of imports and exports using partial equilibrium models where, at any point in time, there is just one national market price. These models assume a single national market for a homogeneous good that embraces all national sales and purchases and in which the good is sold directly by producers to final consumers.[12] The market is assumed to be distinct from other markets, subject to a supply of imports and a demand for exports that are both perfectly price elastic. This allows foreign trade to be introduced simply through changes in the domestic supply and demand functions. Supply becomes perfectly price elastic at the import price and demand perfectly price elastic at the export price.

Within such a model, the national market can be in one of the following cases: (i) self-sufficient; (ii) partly; or (iii) fully supplied by imports. It could be also that (iv) a fraction of or (v) the entire national production can be exported. Here the two states of most practical relevance to import surges are discussed: the initially self-sufficient market and the market that is partially supplied by imports.

[12] For convenience, we use "goods" to refer to both commodities and the products derived from them, other than where it is necessary for a distinction to be made.

4.9.1 For self-sufficient markets

Self-sufficient markets clear without exports or imports. Such a state is possible because the transport and other costs of selling into a market or exporting from it mean that there is a price range within which both exporting and importing are loss-making. Above the upper boundary of this range, importing becomes profitable and below the lower boundary exporting becomes profitable.

For imports to occur in a previously self-sufficient market, there must be an inward shift in the supply function (i.e. less is supplied at each price), an outward shift in the demand function (i.e. more is demanded at each price), a fall in the import price, or some combination of these. Once the market-clearing price is above the import price as a result of one or more of these three changes, importing becomes profitable. This induces imports, which push the market price down to the import price. The market price remains at this level until there is another shift in domestic supply, demand or the import price. Within this model, imports are the additional supply necessary to reduce the domestic equilibrium price to the import price.

The size of the imports necessary to re-establish equilibrium is a function of:

- the pre-import difference between the notional import price and the actual domestic equilibrium price;
- the sizes of the causative shifts in the domestic supply and/or demand functions and/or the import price;
- the price elasticities of supply and/or demand in the domestic market.

These are the variables that determine whether imports are large enough to be considered a "surge".

4.9.2 For markets supplied by imports

Where a country is already an importer, an increase in the amount imported is also caused by a fall in the import price and/or shifts in the supply and/or demand functions. However, unlike in the case of self-sufficiency, the domestic equilibrium price only changes when the increase in imports is caused

by a fall in the import price. In this case, the size of the additional imports necessary to re-establish equilibrium is a function of the size of the price fall and the price elasticities of supply and demand. For a shift in the supply or demand functions, the size of the resulting imports is a function of the size of the shift and, respectively, the price elasticities of demand or supply.

4.9.3 Implications

Thus, the impact of increased imports on domestic producers and consumers depends on a combination of (a) the source of the change that causes the increase; and (b) whether the country is initially self-sufficient or already an importer. This gives the six possible scenarios shown in Table 4.1, which lead to five different outcomes.

In each case, the fundamental cause of the increase in national imports is a rise or an anticipated rise in the profitability of exporting to and selling the good in the domestic market of the country in question. As exporting enterprises usually have the opportunity also to sell in their home country and/or into a third country, the rise in profitability must be relative to profitability in these alternative markets. This suggests that most import surges are likely to be generated, in one way or another, by changes in conditions specific to the importing country in question, either at its border or within its domestic market.

A necessary condition for an import surge is that exporters have knowledge of the changed conditions within the importing country. Exporting to that country will also be easier if exporters have pre-existing relationships with importers. Both these facts suggest that surges are most likely to take the form of increases in existing trade flows rather than new flows.

When analysing an import surge, a necessary initial requirement is to determine the source of the causative change. For each of the three types of change, the source can be external or internal.

For example, the import price might change as a result of (a) a bumper crop in a major exporting country; (b) a rise in subsidies in one or a set of exporting countries; (c) a revaluation of the importing country's currency against those of major exporting countries; or (d) a reduction in an import tariff or an administrative impediment to importing. In the case of an agricultural good, domestic supply is most likely to shift inwards as a result of adverse weather conditions or an increased incidence of attack by pests and diseases, but it could also shift inwards as a result of an increase in international fertilizer prices or a sharp rise in international prices of an export crop that competes for land and other resources. Domestic demand could shift as a result of the failure of the domestic production of a substitute good or as a consequence of an external change, such as an increase in the world price of a domestically produced mineral that raises domestic incomes.

TABLE 4.1
The impact of increased imports on domestic producers and consumers

Type of change	If initially self-sufficient	If already an importer
Reduction in the import price	Producers sell less at a lower price.	Producers sell less at a lower price.
	Consumers buy more at a lower price.	Consumers buy more at a lower price.
Shift in the supply function	Producers supply less but at a higher price.	Producers sell less at the same price.
	Consumers buy less at a higher price.	Consumers buy the same amount at the same price.
	The imports moderate the extent of the price rise.	No change in the domestic price, which stays at the import price.
Shift in the demand function	Producers supply more at a higher price.	Producers sell the same amount at the same price.
	Consumers buy more but at a higher price.	Consumers buy more at the same price.
		No change in the domestic price, which stays at the import price.

While the causes of particular import surges may in most instances appear to be obvious, it is important that case studies nevertheless commence with a systematic examination of possible causes within the framework shown in Table 4.1. This requires assembling for the imported good (a) time series of quantities of domestic production, consumption and imports; and (b) time series of producer, consumer and CIF import prices expressed in the national currency. Having isolated, for example, that a fall in the CIF price is a major cause of the import surge, the next step is to determine the reasons for the fall. This requires examining the time series of the United States Dollar indicator prices for the commodity and of the exchange rate of the national currency against the United States Dollar and also determining whether there have been significant changes to import tariffs, import charges or other factors that affect the unit costs of importing. Analysts will similarly need to establish the causes of identified shifts in supply and demand.

For all three types of change, it will be important to determine whether the change was, or is likely to be, temporary or permanent. If temporary, an important aspect of the case study will be to determine the extent to which impacts of the surge are also reversible.

4.10 Price transmission mechanisms

In line with the previous section on the importance of price analysis, there is a need to examine price transmission because price is the central mechanism by which markets are linked. This section draws entirely from Conforti and Rapsnomamilis (2005). There is indeed a need to analyse how the price shocks from the import surge are transmitted to various stakeholders especially the producers. Spatial price determination models postulate that spatial arbitrage ensures that equilibrium domestic and world prices of a commodity that is sold in competitive foreign and domestic markets will differ only by transfer costs, when converted to a common currency. Therefore, the extent to which price signals are transmitted from the world to the domestic market affects the trade pattern. Transaction costs, border measures and other factors may hinder price transmission, affect trade and weaken the integration of domestic with the international market giving rise to conditions that may result in different trade patterns, possibly including an increased likelihood of import surges.

Studies on the transmission of price signals are loosely founded on concepts related to competitive pricing behaviour,[13] being ostensibly an empirical exercise that aims at testing the predictions of economic theory. This empirical work provides important insights as to how changes in one market are transmitted to another, thus reflecting the extent of market integration, as well as the extent to which markets function efficiently.

In this section, the aim is to provide the basis for discussing the relation between empirical price transmission studies and the likelihood of import surges. Can incomplete price transmission affect the likelihood of a surge in imports and under what conditions? Can we gain insights on the likelihood of import surges by considering the nature of price transmission? Which are the appropriate analytical tools and data that we should use?

4.10.1 The nature of price transmission and import surges

Several authors have studied price transmission within the context of the Law of One Price (inter alia Ardeni, 1989; Baffes, 1991) or within the context of market integration (Ravallion, 1986; Sexton, et al., 1991; Palaskas and Harriss 1993; Zanias, 1993; Gardner and Brooks, 1994; Blauch, 1997). In theory, spatial price determination models suggest that, if two markets are linked by trade in a free market regime, excess demand or supply shocks in one market will have an equal impact on the price in both markets. In practice, domestic markets can be totally or partly insulated by several factors:

- in developing countries, poor infrastructure, transport and communication services give rise to large marketing margins due to high costs of delivering the locally produced commodity to the border for export or the imported commodity

[13] Fackler and Goodwin (2002) provide a comprehensive review of market integration concepts and of the corresponding economic models of price determination. A review is also available in Rapsomanikis, et al. (2003).

to the domestic market for consumption. High transfer costs and marketing margins hinder the transmission of price signals, as they may prohibit arbitrage (Sexton, et al., 1991; Badiane and Shively, 1998). As a consequence, changes in world market prices are not fully transmitted to domestic prices, resulting in economic agents adjusting, if at all, partly to shifts in world supply and demand;

- the implementation of an ad valorem import tariff, in general, will allow international price changes to be fully transmitted to domestic markets in relative terms. However, if the tariff is specific, or its level is prohibitively high, or if other policy tools are implemented (such as tariff rate quotas or other non-tariff barriers), international price changes may not be transmitted to domestic prices;
- non-competitive behaviour such as that considered in pricing-to-market models (Krugman, 1986; Dornbusch, 1987; Froot and Klemperer, 1989) can hinder market integration. Alternatively, oligopolistic behaviour and collusion among domestic traders may retain price differences between international and domestic prices in levels higher than those determined by transfer costs.

A starting point for examining price transmission is provided by the Law of One Price and the Enke-Samuelson-Takayama-Judge model.[14] Given prices for a commodity in two spatially separated markets p_{1t} and p_{2t}, these models postulate that at all points of time, allowing for transfer costs c, for transporting the commodity from market 1 to market 2, the relationship between the prices is as follows:

$$p_{1t} = p_{2t} + c \qquad (4.1)$$

If a relationship between two prices such as (4.1) holds, the markets can be considered to be integrated. However, this extreme case may be unlikely to occur, especially in the short run. At the other end of the spectrum, if the joint distribution of two prices were found to be completely independent, then one might feel comfortable saying that there is no market integration and no price transmission. In general, spatial arbitrage is expected to ensure that prices of a commodity will differ by an amount that is at most equal to the transfer costs with the relationship between the prices being identified as the following inequality:

$$p_{2t} - p_{1t} \leq c \qquad (4.2)$$

Fackler and Goodwin (2002) refer to the aforementioned relationship as the spatial arbitrage condition, and postulate that it identifies a weak form of the Law of One Price, the strong form being characterized by equality (4.1). They also emphasize that relationship (4.2) represents an equilibrium condition. Observed prices may diverge from relationship (4.1), but spatial arbitrage will cause the difference between the two prices to move towards the transfer cost.

Depending on market characteristics, or the distortions to which markets are subject to, the two price series may behave in a plethora of ways, with prices adjusting less than completely, or slowly rather than instantaneously, and according to various dynamic structures, or being related in a non-linear manner. Against this background, price transmission can be summarized into three notions, or components (Prakash, 1999; Balcombe and Morrison, 2002), which are:

- co-movement and completeness of adjustment which implies that changes in prices in one market are fully transmitted to the other at all points of time;
- dynamics and speed of adjustment which implies the process by, and rate at which, changes in prices in one market are filtered to the other market or levels; and,
- asymmetry of response which implies that upward and downward movements in the price, or movements above and below a certain threshold in one market are symmetrically or asymmetrically transmitted to the other.

Complete price transmission between two spatially separated markets is defined as a situation where changes in one price are completely and instantaneously transmitted to the other price, as postulated by the Law of One Price presented by relationship (4.1). In

[14] Enke (1951), Samuelson (1952), and Takayama and Judge (1971).

this case, spatially separated markets are integrated. In addition, this definition implies that if price changes are not passed-through instantaneously, but after some time, price transmission is incomplete in the short run, but complete in the long run, as implied by the spatial arbitrage condition.

Asymmetric response of one price to another implies non-linear adjustment and deserves some further discussion.

Many researchers have worked on the issue of asymmetric price responses (Granger and Lee, 1989) or threshold cointegration models (Enders and Granger, 1998; Abdulai 2000; Scherer and Ross, 1990). Both policies and market power are often cited as a source of asymmetries. Industry concentration and imperfectly competitive behaviour beyond the farm-gate implies that wholesalers, or middlepersons with power over price, may exercise pricing strategies that result in a slow and incomplete pass-through of increases in the international price and a fast and complete transmission of decreases in the international price to prices upstream, as their margins are squeezed.

Is it possible to establish a formal relation between the nature of price transmission and the likelihood of import surges? Theoretical models of spatial price determination often contain either assumptions that are not met empirically, or they contain "identification" of causal relationships which cannot be established by examining price series data alone. For instance, a wedge between domestic and international prices is likely to be explained as being driven by the costs of transfer, marketing and distribution, but also by the existence of monopolies and so forth. However, such models do not yield explicitly testable hypotheses of the existence of prohibiting transaction costs or of monopoly pricing. In a similar vein, a relation between the nature of price transmission and the likelihood of import surges is entirely empirical, whilst no a priori explicit theoretical predictions can be made on the impact of progressively less complete price transmission on the behaviour of imports.

Increased openness to trade may result in an increase in the stability of a domestic market price, if domestic output fluctuations are absorbed by imports. Nevertheless, increased market integration and an improved transmission of price signals from the world market may bring about larger swings in trade flows, therefore adding to the likelihood of sudden import increases in a domestic market, but not to that of surges when these are defined relatively to domestic production. At the same time greater integration with the world market may result in a smooth upward trend in imports and not necessarily in a sudden increase or surge. Much depends upon the characteristics of the specific markets and on the way price signals are transmitted.

In general, integration with large-sized markets of relatively homogenous commodities appear more likely to bring about increased price stability in the domestic markets of countries that are characterized by unstable domestic production, for instance where production is heavily dependent upon the rainfall pattern. At the same time, it should be stressed that the occurrence of import surges is independent, at least in principle, from the stability of the market per se. If importers expect a given degree of instability, they may be prepared to cope with it, while worries about surges are referred to unexpected large variations in imports. It is rather the nature of price transmission and the manner to which markets are integrated that can affect the trade pattern and the likelihood of observing import surges. This is particularly the case where markets are characterized by peculiar cycles that are not synchronized with those of other major markets, and/or where markets are characterized by prohibitively, at times, transaction costs and/or high adjustments costs that give rise to thresholds and non-linearities. A condition such as asymmetric response of domestic prices to the international market prices appears of particular relevance to address countries' concerns on unexpected swings in imports.

Supposing that trade between two markets A and B is intermittent, as B is characterized by high transaction costs, arising e.g. from poor infrastructure and a transport services system. Such transaction costs would make trade profitable only when the price in market A would fall sufficiently low to reduce the price difference between the two markets, say by 25 percent, offsetting transaction costs and allowing spatial arbitrage. A downward shock in the price in A would be transmitted to the price in B only if it results in a decrease in the margin larger than 25 percent. If a 30 percent price decrease occurs in the margin between A and B due to e.g. weak demand, B may experience a sudden and unexpected increase in

imports. In this case, the presence of a high threshold, that arises from high transaction costs, increases the likelihood of import surges, with the transmission of price signals between the two markets taking place only if the margin between the different market prices A falls below a certain threshold.

By the same token, market integration can be concealed by the presence of non-stationary transaction costs, that prevent the transmission of price signals (Barrett, 2001; Fackler and Goodwin, 2002; Barrett and Li, 2002). As a consequence, the international and domestic prices may completely drift apart, thus limiting the information content that prices convey to producers, although price signals are still transmitted from one market to another. Also in this case a large enough shock in the world market may provoke an unexpected swing in imports into a particular country. In a similar manner, if production is characterized by high fixed costs of adjustment, markets may be subject to import surges if the import prices fall sufficiently low, as producers are prevented from adjusting over a certain threshold.

4.10.2 Application methodology

Some techniques for the measurement of market integration and price transmission are presented and discussed here so that they can be employed to gain insights about the possibility of observing import surges. The presence of such non-linearities and thresholds in price adjustment lends itself to a cointegration/error correction empirical interpretation.

Most of the studies which have considered the transmission of price signals as an indicator of market integration use time series econometric analysis techniques that test for the co-movement of prices. However, the extent of price transmission lacks a direct and unambiguous empirical counterpart in the form of single formal testing. More often, time series techniques are employed to address each of the components of price transmission. Such applications include tests for non-cointegration, and Granger causality, the estimation of Error Correction Models (ECMs) and tests for asymmetric response.[15] Each of the aforementioned tests is taken to present evidence on the components of transmission, thus providing particular insights into its nature. For the sake of completeness, a brief overview of these tests is provided below, before concentrating on applications of Threshold Error Correction Models (TECM) that can be more useful in assessing the likelihood of import surges.

The concept of cointegration (Granger, 1981) and the methods for estimating a cointegrated relation or system (inter alia Engle and Granger, 1987; Johansen, 1988, 1991, 1995) provides a framework for estimating and testing for long run equilibrium relationships between non-stationary integrated variables.[16] If two prices in spatially separated markets (or different levels of the supply chain) p_{1t} and p_{2t} contain stochastic trends and are integrated of the same order, say I(d), the prices are said to be cointegrated if:

$$p_{1t} - \beta p_{2t} = \mu t \qquad (4.3)$$

[15] This is also referred as the Granger and Sims causality which refers to Granger (1981) and Sims (1980).

[16] Statistical properties of series can be summarized by the concept of stationarity. A stationary series has a constant mean and a constant finite covariance structure. Such a series does not vary systematically with time, but tends to return frequently to its mean value and to fluctuate around it within a more or less constant range. Alternatively, a non-stationary series has time dependent statistical properties. Non-stationary series may contain stochastic or deterministic trends. Variables that contain stochastic trends are called 'integrated' and exhibit systematic, but unpredictable variation, as compared with series that contain deterministic trends and display completely predictable variation. A stochastic trend in a series can be removed by differencing. The differenced series has statistical properties which are invariant with respect to time, whilst inferences about the similarity of the statistical properties of different economic series can be made by comparing the number of times the series have to be differenced in order to achieve stationarity. More formally, a variable is integrated of order d, written I(d), if it must be differenced d times to achieve stationarity.

[17] The parameter βt has sometimes been interpreted as the 'elasticity of price transmission', when the price series are converted into logarithms. However, this parameter does not identify this elasticity, or in other words, the completeness of transmission, particularly well, as recognized by Balcombe and Morrison (2002) and Barrett and Li (2002). For example, if prices in spatially separated markets have a common stochastic trend reflecting inflation, the cointegrating parameter will be equal to one mirroring a proportionality of unity and implying that price transmission is complete. Nevertheless, failure to reject the null of non-cointegration implies that the two prices drift apart in the long run, as they are driven by stochastic trends that are not proportional.

is I(0).[17] β is referred to as the cointegrating vector (in the case of two variables a scalar), whilst equation (4.3) is said to be the cointegrating regression. Cointegration implies that these prices move closely together in the long run, although in the short run they may drift apart, and thus is consistent with the concept of market integration.[18]

According to the Granger Representation Theorem (Engle and Granger, 1987), if two trending, say I(1), variables are cointegrated, their relationship may be validly described by an ECM, and vice versa. In the case that prices from two spatially separated markets, p_{1t} and p_{2t}, are cointegrated, the Vector Error Correction Model (or VECM) representation is as follows:

$$\begin{pmatrix}\Delta p_{1t}\\ \Delta p_{2t}\end{pmatrix}=\begin{pmatrix}\mu_1\\ \mu_2\end{pmatrix}+\begin{pmatrix}\alpha_1\\ \alpha_2\end{pmatrix}(p_{1t-1}-\beta p_{2t-1})+A_2\begin{pmatrix}\Delta p_{1t-1}\\ \Delta p_{2t-1}\end{pmatrix}+\ldots+A_k\begin{pmatrix}\Delta p_{1t-k}\\ \Delta p_{2t-k}\end{pmatrix}+\begin{pmatrix}v_{1t}\\ v_{2t}\end{pmatrix} \quad (4.4)$$

where v_{1t} and v_{2t} are iid disturbances with zero mean and constant finite variance, whilst the operator Δ denotes that the I(1) variables have been differenced in order to achieve stationarity. Parameters contained in matrices $A_2 \ldots A_k$, measure the short run effects, while β is the cointegrating parameter that characterizes the long run equilibrium relationship between the two prices. The levels of the variables enter the ECM combined as the single entity $(p_{1t-1} - \beta p_{2t-1})$ which reflects the errors or any divergence from this equilibrium, and corresponds to the lagged error term of equation (4.3). The vector $(\alpha_1 \alpha_2)'$ contains parameters, usually $0<|\alpha_i|<1$, i=1,2, commonly called error correction coefficients, that measure the extent of corrections of the errors that the market initiates by adjusting p_{1t} and p_{2t} towards restoring the long run equilibrium relationship. The speed with which the market returns to its equilibrium depends on the proximity of α_i to one.

Another important implication of cointegration and the error correction representation is that cointegration between two variables implies the existence of causality (in the Granger sense) between them in at least one direction (Granger, 1988).[19] If two markets are integrated, the price in one market, p_1, would commonly be found to Granger-cause the price in the other market, p_2 and/or vice versa. Granger (1988) proposed a test for long run Granger causality within the context of the error correction representation of a cointegrated system of variables. The presence and direction of Granger causality in the long run can be assessed by testing the null that the error correction coefficients α_1 and α_2 in the VECM presented by (4.3) are equal to zero.

It is important to note that although cointegration between two price series implies Granger causality in at least one direction, the opposite is not necessarily true. In this case, as noted previously in the discussion on cointegration, lack of cointegration between the two trending price series may indicate that market integration is absent, as other factors such as transaction costs determine the movements of one of the price series. However, Granger causality may exist, indicating that, although the two price series drift apart due to other factors such as non-stationary transaction costs, some price signals are passing through from one market to another. On the other hand, lack of Granger causality may not imply an absence of transmission, as price signals may be transmitted instantaneously under special circumstances.

Time series analysis has been widely criticized for its unreliability (Blauch, 1997; Barrett and Li, 2002) with recent research focussing on switching regime models that incorporate data on prices, volumes traded and transaction costs. Another potential shortcoming of cointegration in testing for market integration is the implicit assumption that transfer costs are stationary (Fackler and Goodwin, 2002; Barret and Li, 2002). In essence, the linear tests for market integration and price transmission described above, are thought of as crude and inappropriate (Blauch, 1997; McNew, 1996; McNew and Fackler, 1997; Fackler and Goodwin, 2002 and Barrett and Li, 2002). Non-linearities in market relationships that arise from arbitrage conditions, unsynchronized price cycles, discontinuous trade and non-stationary or

[18] Engle and Granger test the null of no cointegration by applying unit root tests on $\hat{u}_t$. Johansen derived the distribution of two test statistics for the null of non-cointegration referred to as the Trace and the Eigenvalue tests. Comprehensive presentations of both Engle and Granger, and Johansen tests can be found in Hamilton (1994).

[19] Granger (1969) proposed an empirical definition of causality based only on its forecasting content: if x_t causes y_t then y_{t+1} is better forecast if the information in xt is used, as there will be a smaller variance of forecast error.

high transfer costs are thought of rendering linear representations and models not useful and inaccurate.

The ECM representation, however, also provides a framework for testing for asymmetric and non-linear adjustment to a long run equilibrium and could offer useful insights on the likelihood of import surges. Granger and Lee (1989) proposed an Asymmetric ECM (AECM) where the speed of the adjustment of the endogenous variable depends on whether the deviation from the long run equilibrium is positive or negative. The single asymmetric ECM is specified as follows:

$$\Delta p_{1t} = \mu_1 + \alpha^{+}_{1}(p_{1t-1} - \beta p_{2t-1})^{+} + \alpha^{-}_{1}(p_{1t-1} - \beta p_{2t-1})^{-} + \sum_{i=0}^{k} \delta_i \Delta p_{2t-i} + \sum_{i=1}^{s} \gamma_i \Delta p_{1t-i} + v_{1t}$$

(4.5)

The errors or divergences from this equilibrium are decomposed in two parts, $(p_{1t-1} - \beta p_{2t-1})^{+}$ and $(p_{1t-1} - \beta p_{2t-1})^{-}$ reflecting positive and negative disequilibria respectively. Asymmetry occurs in the event when positive and negative divergences from the long run equilibrium between p_{1t} and p_{2t} result in changes in p_{1t} that have different magnitude. Therefore, asymmetric transmission implies that α^{+}_{1} is not equal to α^{-}_{1}. The null of symmetry against the alternative hypothesis that adjustment is asymmetric is tested by imposing the equality restriction $\alpha^{+}_{1} = \alpha^{-}_{1}$. Short run asymmetric transmission can also be tested by decomposing Δp_{2t} in two parts reflecting price rises and price falls, and testing for equality of the corresponding short run coefficients.

Asymmetric transmission can be considered as a particular case of a threshold cointegration model, in which the threshold is set at zero. In more general terms, the transmission of price signals can take place to a different extent in bands defined by one or more thresholds that may be estimated rather than set by the practitioner. Models of this type were introduced by Enders and Silkos (1999), and widely applied to agricultural price series (Goodwin and Piggott, 2001; Thompson and Bohl, 1999; Goodwin and Harper, 2000; Mainardi, 2001; Abdulai, 2002; Meyer, 2002; Sephton, 2003).

A TECM representation can be written to include two separate coefficients like in the asymmetric case, as follows:

$$\Delta p_{1t} = \mu_1 + I_t \alpha^{1}_{1}(p_{1t-1} - \beta p_{2t-1}) + (1 - I_t)\alpha^{2}_{1}(p_{1t-1} - \beta p_{2t-1}) + \sum_{i=0}^{k} \delta_i \Delta p_{2t-i} + \sum_{i=1}^{s} \gamma_i \Delta p_{1t-i} + v_{1t}$$

(4.6)

with

$$I_t = 1 \quad if\,(p_{1t-1} - \beta p_{2t-1}) \geq c$$
$$I_t = 0 \quad if\,(p_{1t-1} - \beta p_{2t-1}) < c$$

and where c is the threshold. Here the divergences from the long run equilibrium are decomposed in two parts depending on their size, as defined by the threshold c. The restriction $\alpha^{1} = \alpha^{2}$ can be tested to ascertain the relevance of the threshold. If significantly different, the value of the two parameters can be interpreted, given the *caveat* reported above, as a measure of the speed of transmission below and above the threshold. In essence, the TECM reflects a discrete adjustment process that implies that movements towards a long run equilibrium may not take place at all points in time, but only when the divergence from this equilibrium exceeds a certain threshold.

In a less technical manner, TECMs may allow the practitioner to make statements such as the price in market A must be at least *x* percent different to the price in market B before there is transmission of price signals between A and B. A similar logic applies for the prices of two commodities that are close substitutes in consumption. In this case the price of commodity A must be at least *x* percent different to the price of commodity B before there is price transmission between A and B. A price transmission of such nature, duly supported by qualitative information on the characteristics of the markets under consideration, can contribute towards assessing the likelihood that downward shocks over a threshold may be suddenly and unexpectedly transmitted from one market to another, thus determining a swing in prices and trade consistent with the notion of import surge presented above.

14.10.3 Recommendations for applied analysis

This section addresses the issue of whether the nature of market integration and price transmission affects the likelihood of import surges. It is shown that under certain conditions, such as the presence of high transaction costs, or fixed costs of adjustment, asymmetric price adjustment, and more importantly adjustment that takes place over a certain threshold, may imply a high likelihood of experiencing import surges. Nevertheless, in a like manner with all time

series applications to price transmission, it was stressed that there is no a priori structural relation between import surges and the nature of market integration. Moreover, import surges may not be necessarily more likely to happen with a higher variability of trade.

Market integration in the Enke-Samuelson-Takayama-Judge sense and complete price transmission can be formally tested in the long run. However, the extent to which price signals are transmitted from one market to another is an ambiguous concept. Thus, the concept of price transmission is decomposed into notions: co-movement and completeness, dynamics and speed of adjustment and asymmetric response. Asymmetric response implies non-linearities that are testable within a cointegration error correction model framework.

The application of time series econometric techniques requires data on domestic and international prices of a relatively high frequency, such as monthly price series covering a reasonable period such as ten to fifteen years. Annual data may not contain sufficient information to unfold the nature of price transmission and to detect the presence of thresholds. The test for non-cointegration and the estimation of ECMs is straightforward, given the availability of data. The most common method for testing the hypothesis for non cointegration and estimating a cointegrating relationship is based on Full Information Maximum Likelihood (FIML) methods, available in most of econometric programmes. Hansen and Seo (2002) proposed algorithms that can maximize a threshold likelihood function and test for threshold effects.

The presence of thresholds is due to a number of reasons. As previously stressed, high transaction or adjustment costs are likely candidates. However, thresholds may arise due to a number of factors such as tariffs, quotas, market structure and concentration. Therefore, interpretation of thresholds should be context specific, and the econometric analysis should be carried out in conjunction with a qualitative analysis of the market under consideration and a close scrutiny of trade volume and flow data. Markets can be separated spatially, temporally, or though commodity heterogeneity and the interpretation of econometric results should be conducted with care in order to allow more insights to be gained on the extent to which the connection between markets can be conducive to import surges.

4.11 Conclusion and discussions

This chapter describes the nature of the impacts of import surges and highlighted the need for and challenges in assessing these impacts. At the heart of the analysis was the distinction between the type of consequences with the emphasis on the importance of the causation and especially the non-attribution analyses. The various indicators (profit, sales, market shares, prices, etc.) that give insights of the direct harms or benefits from the import surges are useful but they only provide a partial account of the consequences for all the stakeholders involved. Study on price transmission has provided further insights but it remains an insufficient tool to track the consequences especially when markets are segmented, like in some commodities in some developing countries. A full *ex post* impact assessment at the household or at the sector levels is desirable but the resources and especially the data required to perform such analyses are enormous. For these reasons, the WTO guidelines on the analysis leading to these indicators remain the best approach, although such an approach needs to be improved and clarified further to give more precisions on the consequences of import surges in developing countries.

References

Abdulai, A. 2000. Spatial price transmission and asymmetry in the Ghanaian maize market. Journal of Development Studies, 63, 327-349.

Abdulai, A. 2002. Using threshold cointegration to estimate asymmetric price transmission in the Swiss pork market. Applied-Economics 34.

Ardeni, P.G. 1989. Does the Law of One Price really hold for commodity prices? American Journal of Agricultural Economics 71, 303-328.

Badiane, O. & Shively, G.E. 1998. Spatial integration, transport costs and the response of local prices to policy changes in Ghana. Journal of Development Economics, 56, 411-431.

Baffes, J. 1991. Some further evidence on the Law of One Price. American Journal of Agricultural Economics, 4, 21-37.

Balcombe, K.G. & Morrison, J. 2002. Commodity price transmission: A critical review of techniques and an application to selected export commodities. Report to the Food and Agriculture Organization of the United Nations.

Barrett, C.B. 2001. Measuring integration and efficiency in international agricultural markets. Review of Agricultural Economics, 23, 19-32.

Barrett, C.B. & Li, J.R. 2002. Distinguishing between Equilibrium and Integration in Spatial Price Analysis. American Journal of Agricultural Economics, 84, 292-307.

Blauch, B. 1997. Testing for Food market integration revisited. Journal of Development Studies, 33, 477-487.

Conforti, P. & Rapsomanikis, G. 2005. Market integration, price transmission and import surges. FAO Import Surge Project Working Paper No. 6.

Dornbusch, R. 1987. Exchange rates and prices. American Economic Review, March, 93-106.

Enders, W. & Granger, C.W.J. 1998. Unit root tests and asymmetric adjustment with an example using the term structure of interest rates. Journal of Business and Economic Statistics, 16, 304-311.

Enders, W. & Silkos, P. 1999. Cointegration and threshold adjustment. The University of Alabama Economics, Finance and Legal Studies Working Paper Series, n. 01-03-02

Engle, R.F. & Granger, C.W.J. 1987. Cointegration and error correction: representation, estimation and testing. Econometrica, 55, 251-276.

Enke, S. 1951. Equilibrium among spatially separated markets: solution by electrical analogue. Econometrica 19, 40-47.

Fackler, P.L. & Goodwin, B.K. 2002. Spatial Price Analysis. In Handbook of Agricultural Economics. B.L. Gardner & G.C. Rausser, eds. Amsterdam: Elsevier Science.

Froot, K. & Klemperer, P. 1989. Exchange rate pass through when market share matters. American Economic Review 79, 637-654.

Gardner, B.L. & Brooks, G.M. 1994. Food prices and market integration in Russia: 1992-93. American Journal of Agricultural Economics 76, 641-646.

Goodwin, B.K. & Harper, D.C. 2000. Price transmission, threshold behaviour, and asymmetric adjustment in the US Pork Sector. Journal of Agricultural and Applied Economics 32, 2.

Goodwin, B.K. & Piggott, N.E. 2001. Spatial market integration in the presence of threshold effects. American Journal of Agricultural Economics 83 1.

Granger, C.W.J. 1981. Some properties of time series data and their use in econometric model specification . Journal of Econometrics 16, 121-130.

Granger, C.W.J. 1969. Investigating Causal Relationships by Econometric Models and Cross Spectral Methods. Econometrica 37, 424-438.

Granger, C.W.J. 1988. Some recent developments in the concept of causality. Journal of Econometrics 39, 199-211.

Granger, C.W.J. & Lee, T.-H. 1989. Investigation of production, sales and inventory relationships using multicointegration and non-symmetric error correction models. Journal of Applied Econometrics 4, S145-S159.

Hamilton, J.D. 1994. Time series analysis. Princeton: Princeton University Press.

Hansen, B., & Seo, B. 2002. Testing for two-regime threshold cointegration in vector error correction models. Journal of Econometrics 110, 293–318.

Johansen, S. 1988. Statistical analysis of cointegration vectors. Journal of Economic Dynamics and Control 12, 231-254.

Johansen, S. 1991. Estimation and hypothesis testing of cointegration vectors in Gaussian vector autoregressive models. Econometrica 59, 1551-1580.

Johansen, S. 1995. Likelihood-based inference in cointegrated vector-autoregressions. In Advanced Texts in Econometrics. Oxford: Oxford University Press.

Krugman, P. 1986. Pricing to market when exchange rate changes. NBER Working Paper No. 1926.

Mainardi, S. 2001. Limited arbitrage in international wheat markets: threshold and smooth transition cointegration. The Australian Journal of Agricultural and Resource Economics 45.

McNew, K. 1996. Spatial market integration: definition, theory and evidence. Agricultural and Resource Economic Review 25, 1-11.

McNew, K. & Fackler, P.L. 1997. Testing market equilibrium: is cointegration informative? Journal of Agricultural and Resource Economics 22, 191-207.

Meyer, J. 2002. Measuring market integration in presence of transaction costs. A threshold vector error correction model. Department of Economics, Gottingen (mimeo).

Mosoti, V. & Sharma, R. 2005. The interpretation of various import surge-related concepts and definitions in the WTO legal text. FAO Import Surge Project Working Paper No. 3, May 2005.

Palaskas, T. & Harriss, B. 1993. Testing market integration: new approaches with case material from the West Bengal food economy. Journal of Development Studies 30, 1-57.

Prakash, A. 1999. The transmission of signals in a decentralised commodity marketing system: the case of the UK pork market. Unpublished Ph.D. Thesis, University of London.

Rapsomanikis, G., Hallam, D., Conforti, P. & Sharma, R. 2003. Market integration and price transmission in selected food and cash crop markets of developing countries: review and application. Commodity Market Review 2003, FAO, Commodities and Trade Division, Rome.

Ravallion, M. 1986. Testing market integration. American Journal of Agricultural Economics 682, 292-307.

Samuelson, P.A. 1952. Spatial price equilibrium and linear programming. American Economic Review 42, 560-580.

Scherer, F.M. & Ross, D. 1990. Industrial market structure and economic performance. Boston: Houghton Mifflin.

Sephton, P.S. 2003. Spatial market arbitrage and threshold cointegration. American Journal of Agricultural Economics 854., 1041-46.

Sexton, R., Kling & Carman, H. 1991. Market integration, efficiency of arbritrage and imperfect competition: methodology and application to US celery. American Journal of Agricultural Economics 73, 568-580.

Sharma, R., Nyange, D., Duteutre, G. & Morgan, N. 2005. The impact of import surges: country case study results for Senegal and Tanzania. FAO Commodity and Trade Policy Research Working Paper No. 11.

Sims, C. 1980. Comparison of Interwar and Postwar Business Cycles: Monetarism Reconsidered, American Economic Review. vol. 70(2), pages 250-57, May.

Takayama, T. & Judge. 1971. Spatial and temporal price allocation models. Amsterdam: North Holland.

Thompson, R.S. & Bohl, M.T. 1999. International wheat price transmission and CAP reform Agrarokonomische Diskussionsbeitrage No. 53.

Westlake, M. 2005. The transmission of import surge in the domestic market. FAO Import Surge Project Working Paper No. 4.

Zanias, G. 1993. Testing for integration in European Community agricultural product markets. Journal of Agricultural Economics 44, 418-427.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APPROACH AND METHODOLOGY FOR THE ANALYSIS OF IMPORT SURGES

5

5.1 Challenges in studying import surges in developing countries

Identifying the presence, duration, sources and impacts of import surge is a difficult exercise even in developed countries because of the lack of an appropriate definition of an import surge and its duration and the lack of standard procedures in the investigations of the surge. For the developing countries, the challenge is even more daunting because of the lack of resources to gather and analyse relevant information. This chapter addresses these challenges and details an FAO framework with several major steps on how to analyse import surges especially for developing countries. These steps that guide the examination of an import surge include: agreement on the commodity; identification of the like, competitive and substitutable product; performing stakeholder surveys to identify the impact of the surges; collection of data on production, trade, prices and policy; identification of the injured industry and sectors; identification and estimation of injury indicators; establishing causality between injury and imports; and the performing of a non-attribution analysis. Before examining these several steps, this chapter outlines first the challenges in studying import surges.

5.1.1 Terminology and definition ambiguity

The definitions of many key words related to the phenomenon of import surge in the WTO Agreements, as discussed in Chapter 1, are vague and remain open to different, often opposing interpretations. For developing countries this terminology problem is of a great concern when timely decisions have to be made on what intervention is appropriate. For instance, because there is no standard measure of what the duration of a surge is or should be, some measures taken in response to import surge may overshoot and hurt an ongoing import trend rather than help the sector deal with a short-lived surge. Similarly, the minimum rate of increase in import volume that qualifies as a surge has no unique or conventional definition.

5.1.2 Lack of information

Lack of adequate trade data to reveal the presence and especially the duration of an import surge makes the examination of import surge in developing countries difficult. Inability to determine the actual duration of import surge, for instance, leaves no assurance that the observed increase in import is detached from a long increasing trend. Similarly, there is often insufficient information at hand to help assess the impacts, even for an *ex ante* analysis. Measuring the actual injuries at both subsector, let alone economy-wide, level becomes almost impossible.

Another issue is on the measure of the surge itself. The dilemma is on whether the 'net' or 'gross' import is the most appropriate measurement of import surges. Many developing countries are both importers and exporters of specific agricultural products, both in primary and processed forms. With regard to basic foodstuffs, many low-income food-deficit countries (LIFDCs) are net importers. Analysis conducted by FAO for selected major commodity

groups indicates that the numbers of import surges based on net import data were greater than those based on gross imports. This is probably due to the fact that import surges are often accompanied, especially in emergency situations, by a reduction in the export of the same product. This suggests that the use of net import could be a much more rigorous way to identify surges.

5.1.3 Confusion over concurrent sources of import surges

Import surge is often the result of many concurrent contributing factors both internal and external to the countries and, unless its main root cause is fully identified, the setting of priorities to prevent the surge remains difficult. An example is a supply shock due to crop failure at a time when the exporter's currency depreciates or fluctuates. In this case, when resources (time and money) are scarce, choosing the priority between two actions, namely, creating institutional supports to deal with crop risk and revaluing and stabilizing the currency (*vis-à-vis* its trading partner) is difficult. The identification of the root cause and the actions to be taken are even more difficult when the crop failure and currency depreciation coincide with market and trade reforms.

5.1.4 Confusion over the identification of injuries

Identification of the consequences of the import surge also poses considerable challenges in developing countries because besides those caused by surge, the observed injuries may also come from the failures of the market and institutions. This leaves ambiguity about how much responsibility an import surge has in a well-defined injury. For instance, besides import surge, a fall in profit may have come also from irregular input delivery (leading to a sudden hike in input prices), an oligopsony in the product market or other temporary output price policies (e.g. taxation). In such an example it remains difficult to determine the surge's share of responsibility without enough data for analyses. Even if the surge's share of responsibility in a link in the sector's value chain is determined, it is difficult to assess the full extent of the consequences in other links within the sector (e.g. increase in consumers' welfare due to low price), let alone the spillover effects on other sectors over time.[1]

To overcome these methodological and information challenges, a manual has been prepared before the investigations on import surge in developing countries are performed. The manual is presented and detailed in Sharma (2005b) and is discussed at length in the next sections.

5.2 Overall analytical approach

The overall analytical approach for the country case studies is based on typical steps taken in the investigation of the WTO trade remedy measures (i.e. AD, countervailing and emergency safeguards) for the purpose of the WTO disputes. This makes sense given the WTO-context of the phenomenon of a surge and its injury. Of the three measures, the approach taken in the SA is more relevant for the surge case studies. In recent disputes involving this Agreement, Panels and ABs have elaborated on the approach to be taken, various stages of the investigation and analytical standards. Although these standards, in the context of dispute panels, have proved too stringent, the standard provides a useful framework to follow. At the cost of some simplification, Box 5.1 shows the five key elements or building blocks of this approach. In addition to the WTO legal materials, the rapidly expanding literature on the impact of trade liberalization on markets, poverty and food security provide ample analytical insights and methods in particular for the case studies on import surges.

Although it is obviously a daunting task to go through all these stages thoroughly, these requirements make good logical and economic sense. For example, there has to be a surge, above all; otherwise imports cannot be the cause of the injury. Second, there has to be injury because a surge may or may not cause an injury, if there is no injury, the

[1] In some cases, however, the segmentation of markets (due to geography and lack of infrastructure) in developing countries can be an advantage in identifying the injury as a market segmentation may easily help isolate and assess the effects of an import surge on the sector for a particular area or a group of stakeholders.

entire rationale of undertaking the investigation is lost. Third and fourth, imports have to be the cause of the injury, either on their own or in combination with other factors. Moreover, it needs to be demonstrated that the role played by other factors in causing or contributing to the injury is properly identified, and the problems caused by other factors are not attributed to imports.

While the five elements or stages of the analysis are sequential, and will be discussed likewise in this chapter, the research will require additional activities to move from the surge identification process to the actual identification of injury and causality.

The analysis that adheres to the five aforementioned key building blocks for investigating import surges is thought of being consisted of several steps that the next section will discuss in detail. Within the steps, several analytical tools are proposed in order to guide and facilitate the research to be undertaken by the national consultants for policy uses. It is only after determining the nature and extent of injury and showing causality that measures which would remedy serious injury and facilitate adjustment can be proposed. To facilitate an understanding of the process, additional materials and specific examples are presented in the Annexes at the end of this chapter.

Box 5.1
Five key building blocks of an investigation of a surge and its effects

- Surge – a proof that a surge has occurred and is occurring;
- Reason – the potential causes of the surge are identified;
- Injury – the domestic industry (properly defined) is injured on the basis of several indicators listed in the SA (as well as other indicators as relevant);
- Causation – there has to be a causal link between imports and injury; and
- Non-attribution – the injury caused by other factors (other than imports) have to be properly identified and accounted for.

5.3 Identification of the problem and collection and analysis of basic trade statistics and policy information

Step 1 – Establish whether or not imports have increased

It is critical at the onset of the analysis to establish that "a product is being imported in such increased quantities, absolute or relative to domestic production, and under such conditions as to potentially cause or threaten to cause serious injury to a domestic industry producing like or directly competitive products." In addition, the public interest in this issue, and an acknowledgement of the "social relevance" of the issue needs to be confirmed through discussions with various stakeholders.

Step 2 - Stakeholders' survey[2]

Various stakeholders in the country are expected to hold different views on the issue of the surge, notably perceptions about how imports have affected markets and households, both positively and negatively. As an example, local processors of imported milk powder may perceive these imports to be beneficial for the consumers and economy, while local producers of fresh milk will see the effects differently. Government officials, with their often different mandate and constituency may also see the issue differently, with officials from finance differing in their perspective from officials from the Ministries of Trade or Agriculture[3]. Also importantly, different perceptions that these stakeholders have, whether they be consumers, producers, non-governmental organizations (NGOs), or government officials, lead to a better understanding of at the channels or

[2] The subsequent three elements, collection and analysis of trade, price and policy data, can proceed simultaneously at this stage, although it is better to complete the stakeholders' survey first because this helps sharpen the scope and focus and so helps avoid collecting information that is not essential.

[3] Note that it has sometimes been observed that officers from these three ministries hold different views on the issue – hence the importance of knowing their views.

mechanisms through which imports cause injury or benefit. Therefore, it is considered important that a survey of various stakeholders be undertaken prior to data collection or analysis. The evidence and views of all interested parties should be considered and the purpose of this activity is to verify that the issue is of public concern.

To the extent possible, while this step is focused on assessing the market impact of a surge, specifically the extent and nature of industry injury, the surveys should be used to understand the broader extent to which the import surge is affecting poverty, food security or livelihoods of vulnerable groups.

There is no particular method how a stakeholder survey is undertaken. It can amount to informal chats, with or without structured questionnaires, lasting one or two hours with each of the stakeholder identified (see Annex 5.1 for some illustrative questions). Interviews with additional stakeholders, perhaps in stakeholder fora, may generate more dialogue and insights. Depending on the commodities identified (including the range of "like" and competitive products, and parties potentially affected), the following would be typical stakeholders for the survey:

- producers and their associations;
- consumers and their associations;
- other users (e.g. hotels, super markets);
- chambers of industry/commerce;
- importers, wholesalers, other economic agents such as transporters;
- NGOs/CSOs;
- government e.g. agriculture, trade and finance ministries;
- research/academic community.

Step 2 bis[4] – Identification and agreement of "like", competitive and substitutable products

The next activity in the surge case study, which should also be discussed in the stakeholder surveys, focuses on the identification of products that are directly or indirectly affected by the imported product. This determines the range of commodities and subsectors affected (e.g. markets) for which data are to be collected and analysed.

"Like", competitive and substitutable products are terminologies found and defined in the WTO Agreements.[5] Under the 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. An example of the classification of these terms is the case of SMP. It is not, according to WTO definitions, a "like" product to fresh milk. However, in fact, reconstituted liquid milk from milk powder competes directly with fresh milk produced in the country. A commercially produced broiler cut is considered a "like" product to an imported leg quarter while live chickens are considered a competitive product as are beef, fish and pork. Animal feeds (grains) are often not "like" products, but can be substitutable products in terms of protein content. Thus, an import surge in a product not only affects the "like" domestic product but is also competitive or substitutable products. This identification of affected products is important for identifying various market participants affected by the surge.

Table 5.1 gives examples of some "imported" commodities and their "like", "competitive", and "substitutable" products. Essentially, such an identification is not a difficult task but some care is needed in determining what attributes make a product "like" versus competitive or substitutable. Often, "like" products are differentiated based on one or more quality characteristics related to factors such as agroclimatic differences, processing, packaging, consumer tastes and habits, etc. Meanwhile, product characteristics determine such qualities as

[4] "Bis" numbering is used in several places in this chapter to emphasize the fact that this step is not sequential but occurring at the same time.

[5] See the background paper on import surge by Mosoti and Sharma (2005) for these legal definitions and interpretations.

TABLE 5.1
Examples of "like", "competitive" and "substitutable" products

Imported product	"Like"	"Competitive" or vertically linked	"Substitutable" or horizontally linked	Input/output (other affected sectors)
Chicken leg quarters	Domestic commercial broiler meat	Live birds	Beef, fish, pork, eggs	Feed
Broken rice	Domestic broken rice	Milled rice, Paddy rice	Millet, maize, cassava	Feed, rice cakes, beer
Refined sugar	Domestic processed sugar	High Fructose Corn-Syrup (HFCS), other sweeteners	Raw sugar, sweeteners	Begas
Whole milk powder (WMP)	Domestic whole cow milk powder	Fluid milk, processed milk from domestic production	Milk powder of other species	Yogurt, cheese, butter
Palm oil	Domestic palm oil	Palm kernel	Butter, other oils	Soap, other industrial uses of oils

perishability, storability and so on. The identification of these products (and markets) will determine the scope of the study and subsequent data collection and analyses, e.g. price and trade data, policies, competition analysis and so on.

Steps 3 - Collection and analysis of statistics and information on: i) trade or imports; and ii) import policy for selected commodities

The timing and nature of the surge needs to be considered when determining the exact years of data needed, whether they be trade, policies, prices or other injury indicators. This is necessitated by the fact that the impact assessment of a surge may need to be reviewed over a long period than just the surge itself. The identification and understanding of the reason for a surge will determine the trade remedy response; however, the nature and duration of the injury will determine the types of appropriate impact compensation.

Step 3a - Collection and analysis of trade statistics for selected commodities

Trade data are obviously the key to identifying an import surge. The first important purpose of the import data is to demonstrate the surge, or a strongly rising import trend. These data will also be useful for a variety of purposes, e.g. to identify the origin of the product (exporter) or the price of the product so that the reasons for the surge can be adequately analysed.

The following import data would be required to establish a surge though the usual approaches.[6]

Import data by volumes, values and sources

- product or commodity coverage - statistics for the products identified earlier in Step 1 (i.e. imported product under study, and "like" and competitive products). Often, these products are at HS6 or HS8 level (e.g. whole chicken, chicken cuts, broken rice, etc.);
- origin of the import – i.e. exporters, including their market shares;
- period – as far as possible, all statistics (e.g. import volume and value, derived import prices) and related information (e.g. policy regime) should be for a period of six years.[7] Where monthly data are not available, identify appropriate quarterly or annual statistics.

[6] These are: 1) the approach taken in safeguards dispute cases as illustrated in FAO Import Surge Working Paper No. 3 (Mosoti and Sharma, 2005); and ii) the approach of the Special Safeguard of the AoA, as illustrated in FAO Import Surge Working Paper No. 2 (de Nigris).

Analysis of the trade data

1. Demonstrate a surge – analyse the trends in the monthly trade statistics to demonstrate that imports have surged (optionally, use the AoA's SSG method on volume surge to determine if conditions are met for volume triggers).[7]
2. Changing composition of imports - review the data to identify any change in trends in the source and composition of imports (e.g. frozen chicken parts versus whole birds).
3. Changing import prices – calculate the per unit import prices of the appropriate product. To facilitate this review, annual data could be used.
4. Comment on the statistics - comment on the reliability of the data and indicate any problems which limit the data's usefulness for analysis and a trade surveillance system. Provide some preliminary comments on whether the import surge could have been caused by a sudden decline in import prices.

Note: It is useful to separate **food aid** from commercial imports. Therefore, collect trade statistics on commercial imports and food aid separately where the product in question is also received as food aid. The definition of food aid can raise issues for the definition of commercial trade. There is a spectrum of terms and conditions on which imports take place, which for convenience may be divided into three groups:

(a) normal commercial sales;
(b) other sales, where the costs to the importer are reduced by e.g. export subsidies, export credits on non-commercial terms (grace period, lower than commercial rates of interest, usually favourable insurance or freight rates);
(c) food aid properly provided on full grant or highly concessional terms.

For the purposes of this project, import surges would ideally be estimated on the totals of groups a) and b) but in practice, while attempts can be made to estimate commercial imports correctly, it is not always clear whether the figures on total imports include every food aid transaction or not. It is recommended that statistics be collected on both food aid and commercial trade but that the basic analysis should focus exclusively on commercial imports. However, the study should provide details on the amount and nature of food aid provided, if appropriate, particularly if there is evidence that food aid has a role in counteracting or worsening the effect of an import surge.

Similarly, the presence of substantive **re-exports** of the imported product (or substitutes), including in processed form (e.g. raw sugar imported and refined sugar exported) distorts the analysis and gives a wrong conclusion. Therefore, this aspect needs to be assessed, if necessary by also collecting and analysing export data.

Step 3b – Documenting and analysing border measures governing the import regime of the selected commodities

This is yet another building block of the surge analysis. The purpose is to document all policy measures that affect imports, and to review them in the context of the import surge or trends identified earlier. This requires going beyond ordinary tariffs (*ad valorem* or specific) to include other non-tariff measures that may be effective constraints to imports.[8]

First, as the primary purpose of the policy information is to explain trends in imports, the period for policy review should be the same six years adopted for trade statistics. Second, the commodity or product coverage of the import measures should be the same as above, i.e. the main imported product being analysed and its like and competitive products. This helps to understand policy bias if any among competing products (e.g. in terms of effective protection rates), and tariff escalation or de-escalation if any. It is important that all changes over the time period in the import regime of "like" and other products be highlighted.

[7] The typical period that Panels have considered in safeguard investigations.

[8] The WTO's Trade Policy Review reports, if available, is a good reference for this type of review. However, this information should be validated through a comparison with information collected from national sources.

Tariff measures

Customs duty:

- the WTO bound rate;
- applied tariff - type and rates during the review period;
- common external tariffs (CETs) in case of customs union;
- tariff applied to partners of a Free Trade Area (FTA);
- exceptions/exemptions made if any, e.g. to imports by an STE and food aid.

Other taxes and duties (these are often statistics tax, infrastructural taxes and so on).

Non-tariff measures

- import restrictions - seasonal or annual bans, tariff quotas if any during the review period;
- import licensing – are imports (or related products, such as feedstuffs which are an input to the livestock sector) subject to license? Automatic or non-automatic license? If non-automatic, discuss the cost/difficulties involved in obtaining/ distributing licences;
- trade remedy measures – what form of trade remedy measures are applied? (SSG of the AoA, other WTO general trade remedy measures);
- imports by STE – are STEs involved in imports? How could this have affected the imports?
- standards and technical requirements – refer to Sanitary and Phystosanitary (SPS) and technical barriers to trade (TBT) measures in place during the review period;
- minimum import/reference prices – sometimes permitted by the World Customs Organization.

5.4 Analysis of competition, causal relations, injury and non-attribution issues

The investigation, after having identified affected products and obtained basic trade statistics and policy information, should then focus on the further stages as shown in Box 5.1. The nature of competition between imported and domestic products needs to be identified, as well as the manifestation of injury and its indicators. In addition the factors other than imports affecting the industry, positively or negatively, need to be analysed (the non-attribution analysis).

Step 4 – Identifying market segments where imports compete with domestic products

The essential challenge underlying this analysis is to understand the nature of the competition and its implications. The impact on domestic products (in terms of price, sales volumes) will be different according to this nature of competition. A formal way of understanding this relationship is in terms of price elasticities of substitution, but that requires econometrics and lots of statistics, which may not be feasible for the case studies. Therefore, analysts need to use other, less formal methods to characterize the nature of competition. One obvious way, building on the activities in Step 2, is to conduct interviews with stakeholders (e.g. consumers, local producers) to determine how they see the nature and strength of the competition, and thus the economic implications for various economic agents.

Market competition takes place at particular market segments where impact could be sizable. It is a challenge to identify such points or market segments, which can have both spatial and temporal dimensions. In most cases, comparing total imports with total national production (i.e. assuming one single market segment) is not useful because often imports are a small fraction of total production (e.g. imported milk powder and total milk production in the country). Any estimate of the impact from such aggregate data would be likely negligible and potentially misleading. The identification of these segments is very commodity and country-specific (e.g. processed products could have multiple competition points along the value chain in contrast to products that are not processed).

Defining the domestic "industry" in the sense of the WTO Agreements

For a surge investigation aimed at determining injury or threat thereof, a "domestic industry" that is affected needs to be defined. The industry, according to the WTO ASG, is interpreted as "the producers as a whole, of the like or directly competitive products operating within the territory of a member, or

those whose collective output of the like or directly competitive products constitutes a major proportion of the total domestic production of those products."[9] Thus, for example, if the product in question is imported milk powder, the corresponding domestic industry would be milk farmers in the country (in the sense of the wider "competitive product") and "milk processors" (in the sense of narrower "like products").

The reference to the sizable "collective output of the product" is to avoid cases where an investigation is undertaken because only one or two firms producing a fraction of the total product are affected. For the surge case studies, it would be useful to try to identify the industry as defined by the Agreements, and to point out potential conflict with this definition where a surge affects only a small segment of the domestic industry.

Mapping the industry/sector

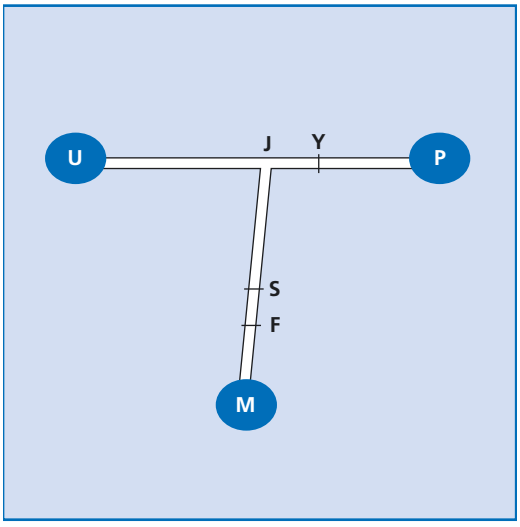
Mapping is a valuable tool for understanding the points of market competition between products and its nature. This exercise will provide input into subsequent parts of the study, e.g. how to study the competition, identify injured economic agents and data needs. Figures 5.1 and 5.2 show two illustrations of the type of approach useful for identifying market segments for the purpose of competition analysis.

Figure 5.1 is from Westlake (2005). This figure focuses on understanding the spatial dimension of competition by way of identifying distribution of imported products, points of competition, production areas, major consumption centres and so on.

The diagram indicates the following important nodes in the process of the spatial flow of the imported products across the country.

1. The point of import (typically the port) - M in the figure.
2. Production area/areas - P in the figure.
3. Consumption area/areas (typically urban area/areas) - U in the figure.

FIGURE 5.1
Identifying points of competition by mapping



Source: Mucavele (2000); Westlake (2005).

The points S, F, J, Y are arbitrary points along the routes connecting U, P and M.

It is assumed that the good is produced in one main surplus area (P) in the east of the country, imported through one port (M) in the south and consumed mainly in one main urban area (U) in the west. At a point (J) the route from the port joins a route running from the domestic surplus producing area to the main urban area. As M is not in an area of surplus production, importers maximize profit by selling as close as possible to M (closeness being defined in terms of unit transport costs rather than distance). Their profits decline as the good is transported further into the country along the route from M to J. This is because the cost of marketing the imported good increases whereas the unit marketing cost of the competing domestic good falls as one moves closer to P. Imports penetrate to the point at which the imported good can be sold in competition with the domestically produced good at a price that just covers importers" unit costs and the minimum profits per unit that they are prepared to accept (Point F). Importers" unit costs comprise their costs to CIF plus their costs from CIF to the point of sale. At all locations from M to F, the entire supply comprises imports. At all other locations supply is from domestic production. Between M and F,

[9] See Mosoti and Sharma (2005) background paper for details.

prices are lower than if there were no imports, with the difference between the pre-import and post-import price falling as one moves from M to F.

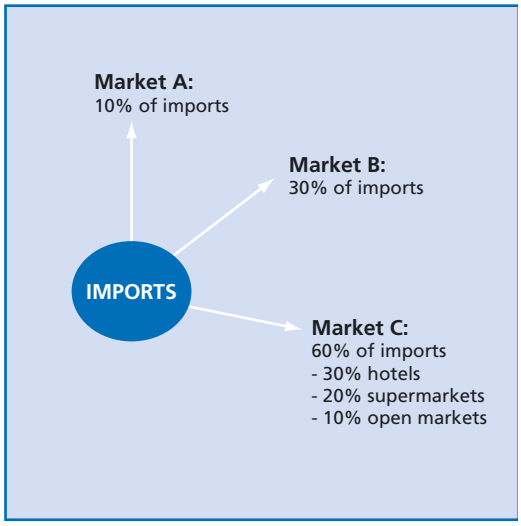
Now assume that the import price falls and imports increase, pushing the point at which the two sources compete to S, further down the route from M to J. This further lowers prices along the import route from M to F and reduces prices from F to S. However, it will not change them elsewhere.

If the import price fall is just sufficient to make the unit cost of imports equal to the domestic market price at point J, imports will penetrate to this point, where the price will be equal to the unit cost of imports. Having penetrated and competed successfully with the domestic good at this point, importers will be able also to compete successfully at all points through to the main urban market U, provided their unit marketing costs are not higher than those of traders of the domestic good. Thus, this market will be supplied with both the domestic and imported good. At each point from M through J to U, the price will be lower than before, equal to the unit cost of marketing imports to that point. Prices will be unchanged along the route from P to J.

If the unit cost of imports at point J is less than the prior domestic market price, importers are able to sell profitably from J back towards the main producing area P. Imports will penetrate along this route until increases in their marketing costs and the reduced costs of marketing the domestic good prevent them from selling profitably any further towards P (Point Y). In this case, all sales at points from Y along the marketing routes to U and M will comprise imports. Prices will be lower at each of these points, with the price reduction being greatest at M, diminishing to J, staying constant from J to U and diminishing further between J and Y. The price will be unchanged between Y and P.

Prices rise as one moves away from the port, down M towards J. This is the reverse of the pre-import situation, where prices increased progressively towards the port. Prices through to the main urban area will also be lower, but the *increases* in price as one moves away from point J, will be roughly the same as before. This outcome for prices is generally consistent with the impact of imports in the simple supply and demand model shown in Figure 5.1. However, there is not an identical proportionate fall in all prices throughout the country, and in parts of the country prices are unaffected.

FIGURE 5.2
Market segments and competition



Sources: Mucavele (2000); Westlake).

Figure 5.2 is another illustration similar to the above. It shows, for example, that a country imports a known quantity of poultry, which are marketed as follows: 60 percent in the capital city (Market A); 30 percent in the interior market (Market C); and 10 percent in another market (Market B). It also shows the sales of the first 60 percent in the capital city. This essentially implies that there are three "market segments" in the capital city itself. The primary reason why "three" market segments are identified in this illustration is to stress the fact that the "nature" of competition could be different in these three segments, e.g. strong competition ("high price elasticity of substitution") in open markets but weak competition in supermarkets.

Step 5 – Identifying injury indicators

This activity needs to refer to the definition of the domestic industry (Step 4) because injury indicators for industry A, e.g. farming or producers, would be different from industry B, e.g. milk processors.

Although the concept of injury and its indicators are widely known to specialists and non-specialists, these are also defined and listed in the WTO trade

remedy measures.[10] The Subsidies Agreement in particular defines the concept of serious injury as a *significant overall impairment* in the position of domestic industry. Likewise, a *threat of serious injury* is understood to mean serious injury that is clearly imminent. The Agreement *requires* an evaluation of *all* relevant factors having a bearing on the situation of that industry and goes on to list the following indicators as being *particularly* required:

- rate and amount of the increase in imports of the product concerned in absolute and relative terms;
- share of the domestic market taken by increased imports;
- changes in:
  - the level of sales;
  - production;
  - productivity;
  - capacity utilization;
  - profits and losses; and
  - employment

The surge case studies need not follow everything that is said in the Subsidies Agreement, but the guidance is helpful. In particular, analysts need to consider at least four to five injury indicators that are particularly relevant for the industry in question. Annex 5.2 shows some examples for the chicken meat sector; obviously the indicators will differ by commodity and, as mentioned, by the nature of the participation of the economic agent along the marketing chain.

An evaluation of all relevant factors, which could include factors not listed in the Agreement, would include other relevant commodity specific indicators applicable to different segments of the entire length of the supply and distribution chain, e.g. even impact on transporters, input suppliers, etc.

Prices were not included in the aforementioned list but it is clear that prices are of overriding importance. The impact on market prices is one of the key indicators of injury. The Antidumping Agreement in particular singles out impacts on domestic prices as a key injury indicator. Consequently, the market price is one key variable to be collected and analysed in any economic analysis. The collection of price data is discussed next, as a supplement to the section on injury indicator.

Step 5 bis – Collection of price data for the surge case studies

Changes in relative prices are one of the key channels through which the impact of an import surge is felt by market participants (the other channel being production and consumption responses to price changes, or "second round" effects). Price data are also needed to understand spatial transmission of shocks due to imports (discussed later). The surge study would require a range of price data, notably the following:

- domestic market prices of the imported and affected commodities – this is required for better understanding the nature of competition between domestic and imported products. Price ratios or other more sophisticated analysis should reveal if there has been some "price undercutting" due to imports;
- ideally, monthly price data would be essential for detecting such price effects. The overall period for which the price data would be required would be the same six-year period as in trade and policy data;
- as several or most case studies would be looking at effects from the angle of "vertical" market structure, it would be useful to collect price data relevant at the levels of farm, wholesale and retail. Producer price data are often available on a yearly basis, and so analysts may consider using some proxy for this (e.g. monthly wholesale or retail price data for a market closest to the producing area);
- the price data should cover not only the "like" product but also those of competitive products and substitutes, e.g. commercial broiler cuts, live birds and feed prices. It should be remembered that the injury indicators related to an import surge in a commodity such as broiler meat can be revealed through changes in feed prices;

[10] See Mosoti and Sharma (2005) background paper for details. Also, Sharma (2005a) and Grethe and Nolte (2005) include more explanations.

- for analysing the transmission of price shocks across markets (discussed below), price data are needed for the spatially separate markets. The selection of the appropriate market prices should be clear through the market mapping exercise undertaken in Step 4;
- other considerations, but mainly at the stage of analysis, include understanding seasonality patterns, and expressing prices in real terms as needed.

Step 6 – Causation analysis: relationship between imports and injury indicators

The term "causation" or "causal link" denotes a relationship of cause and effect such that increased imports contribute to "bringing about", "producing" or "inducing" the injury. It is obvious that such a relationship should exist in order to make a case that imports have caused injury. Otherwise, the cause of the injury needs to be attributed to factors other than imports (see discussion on non-attribution analysis in Step 7).

WTO dispute panels have to deal with this question in all safeguard cases. Because of the difficulties of attributing causality, Panels in recent disputes have developed an approach to handle this issue.

The Panel of a specific trade dispute in 2001 considered the following three-step process as the appropriate approach for this part of the investigation.

1. The need for a correlation analysis: identify the relationship between the *movements* in imports (volume and market share, etc.) and the *movements* in injury factors (e.g. sales, production, productivity, capacity utilization, profits and losses and employment).
2. Additional insights/analysis: determine whether the conditions of competition between the imported and domestic product as analysed demonstrate the existence of the causal link between the imports and any injury. While vague, this step requests that additional analysis and insights be provided on why there is a causal link. In the absence of the expected negative correlation, the case is not dismissed but more and stronger evidence must be produced to argue why imports have caused injury despite the positive correlation.
3. Non-attribution analysis – ensure that all other relevant factors have been analysed and establish that injury caused by factors other than imports has not been attributed to imports (discussed in Step 7).

The WTO approach makes logical and economic sense. In view of this, the case studies shall strive to collect data that allow a correlation analysis or, as a minimum, allow for a graphical depiction of the relationship between imports and injury indicators. The challenge is to provide the additional analysis and insights necessary to make a compelling case that the relationship is negative, or positive, or none.[11] This requires a creative analysis of the relevant injury factors identified earlier.

Step 6 bis – Analysing causation across spatially separate markets – the study of price transmission

There would be several instances in the case studies where competition between imported and domestic products has a spatial dimension. In Figure 5.2, for example, about 40 percent of the imported products are sold in far-away markets B and C. Even where the products are not sold outside of the capital city, it is possible that farmers in those areas are affected through a change in relative price of the product they sell to the capital city market (Market A) or/and their sales are displaced.

Therefore, in order to understand how surges have affected, or will affect in the coming years, markets located in distances from the main market, analysts undertake "price transmission" studies. These studies use econometric time-series techniques to determine whether and to what extent shocks, such as changes in relative prices that originate in one market, are felt in other markets. There is large and growing literature on this.

For this part of the study, the key statistics required are price data for the markets that are part of the transmission analysis (part of Step 5 bis). As with all econometrics methods, sufficient data points are required for the analysis. Therefore, national analysts should collect monthly price data (retail or wholesale,

[11] At this stage of the study, it would help the analysts to review the "causation" sections of some WTO disputes where panels tried to make sense of the correlations presented by the parties to the dispute.

depending on availability and quality) for a number of years, about six, the same period as for other analysis, which gives about 72 observations. Where price data are readily available, it would not be an issue to use longer periods for the analysis.

In addition to the price data, the following qualitative information and insights would be useful to interpret the results:

- transaction costs (including periods when these changed markedly for some reason) involved in shipping products across the markets (transport costs, credit availability and other costs of doing business);
- trade flow pattern: e.g. seasonality of specific product trade flows between markets which could include reverse flows in some periods, etc.;
- other elements which can determine rigidities in the transmission of price signals, such as information costs, physical and/or cultural barriers.

Step 7 – Non-attribution analysis: making sure that the role of factors other than imports are properly identified and accounted for

The so-called "non-attribution analysis", mentioned in previous sections, is an integral part of the "causation" analysis. Non-attribution analysis implies an understanding of all other relevant factors potentially implicit in injury issues and the determination that injury caused by factors other than imports has not been attributed to imports.

Any analysis of a cause and effect type needs to take into account the effects of other causal factors, so that injury caused by other factors is not wrongly attributed to the causal factor under investigation. Many WTO disputes, or other studies, have failed or been discredited because a country that has put into place a safeguard measure failed to properly undertake the non-attribution analysis.

The factors other than imports that could cause injury vary from commodity to commodity and from country to country. Some examples of such factors examined in the WTO disputes include credit tightening, hiked interest rates, exchange rate overvaluation, overall economic recession, rising labour costs, changing consumer tastes, export surge which might prompt imports of a good as an input into the production of export products and so on. Once the national analysts develop a good understanding of why and how identified industries may be suffering, these potential causal factors should be evident. These are the underlying factors which potentially underpin the competitiveness of a domestic industry.

Step 7 bis – Competitiveness of the domestic industry affected and the role played by imports and other factors in influencing competitiveness

One approach to better identify these factors could start with a cost of production survey which reveals the sources of the industry competitiveness or lack thereof. A cost of production survey is the starting point of a competitiveness analysis because it brings together in one place all possible costs (e.g. in Table 5.2). These statistics could then be used for a variety of analyses to better understand the role played by factors other than imports in determining or undermining the competitiveness of the industry in question.

The cost of the production approach involves collecting survey-based cost of production (complemented by reviewing any type of secondary data generated by government or industry sources). It is important that trends in competitiveness be evaluated through using one year data and constructing trends around the various costs (see below). It is particularly important to describe and investigate firms or market/industry efficiency and the presence of economy of scale. These two issues are particularly relevant in understanding how and if domestic products can compete with imported products.

A typical procedure for a cost of production survey:

- identify appropriate year for deriving cost data (preferably a "normal' year);
- investigate cost data availability from government, official statistics, etc.;
- collect primary data using semi-structured interviews;
- calculate average costs for different sized (in terms of quantity produced and employees) firms and farms;
- compare the data with international price;
- by collecting data from different size firms and farms, build up an average cost curve for the

Table 5.2
Typical costs of production in farming

Traded intermediary	Non-traded intermediary		Primary factors
	Direct use		
Fertilizer	Manure		Land: irrigated non-irrigated
Pesticides	Services:		Labour: skilled and unskilled
Fuel		Handling	Sunk capital or fixed assets
Lubricants		Transport	Tractor
Seeds		Electricity	Draft power
		Repair and maintenance	Farm implements
		Insurance	Buildings
	Indirect use		
	Land	Embodied in non- traded intermediary	
	Labour		
	Capital		

Note: Data requirement will vary depending on product type and level of the value chain (producer, processor) being evaluated.

sector/industry. This is useful for investigating the presence of economies of scale and efficiency;
- investigate how costs have been changing by collecting point data on certain elements of the cost data (e.g. wages, energy prices, etc.), or by developing some general indicators from stakeholders.

There are several ways of summarizing and adding value to the statistics thus collected and analysed, in particular using the data to calculate various indices. One technique is to use the concept of effective protection coefficient (EPC). This coefficient is particularly useful when comparing products with very different levels of input use. An additional technique for analysing these data is Policy Analysis Matrix (PAM) while the use of the Herfindahl Index and Concentration Index measures industry concentration or, on the other hand, the degree of segmentation and market power.[12] The use of these tools should be used when (i) additional insight on how factors related to the competitiveness of a particular product could result in an import surge; or (ii) reveal the factors which make a particular product/industry susceptible to injury from imported product. These indicators are formally defined in Annex 5.3 and useful background documents are listed in the references.

To better understand the statistics and their underlying trends, all domestic policies, or changes thereof, which would influence the competitiveness of the industry should be highlighted. This should include those for competitive and substitutable products. Examples could include pricing policies, input subsidies, subsidized credit, etc.

5.5 Concluding remarks: analysis of the institutional capability for a trade surveillance system

One of the main goals of the surge investigation is to provide a broader understanding of the capacity

[12] See Tsakok (1990), Mucavele (2000).

of the developing countries to use enhanced trade surveillance and trade remedy measures with the objectives of identifying, analysing and responding to import surges. Critical to this objective is an understanding of the institutional capacity of the government (institutions, statistics, etc.) to develop and strengthen trade surveillance systems. This would include the ability to respond to the problem with WTO trade remedy measures (including the SSM) as well as appropriate domestic response measures. In addition, an assessment of the type and appropriateness of domestic policy responses, in the context of the implementation of WTO trade remedy measures, should be provided.

In order to assess the actual situation, the following information needs to be documented:

- institutions involved in trade monitoring; their role and analytical capability;
- number of ports and personnel (from various agencies) involved in trade surveillance activities;
- an assessment of constraints to effective trade surveillance (through discussions with customs agents, policy-makers, representatives from international organizations involved (such as Crown Agents);
- a brief description of what is required for building this capability;
- elaboration of appropriate domestic policy responses, if needed.

The implementation of these steps in this chapter does not guarantee a full view of agricultural import surges in the selected countries and commodities. Nevertheless, these steps provide a better understanding of the impacts of an import surge and inform on the appropriate measures to deal with its impacts.

APPENDIX 5.1
QUALITATIVE APPROACH: REVIEW OF VARIOUS STAKEHOLDERS TO THE SURGE

(BASED ON ONE-TWO HOURS OF INTERVIEWS WITH KEY STAKEHOLDERS)

Government

- What is the view of the government officials on the surge? Do they consider recent import trends as being "surges"? (responses often differ between officials from Ministries of Agriculture, Commerce and Finance).
- If the phenomena are considered to be surges, what was the government response? Responses often take the form of raising applied tariffs, other regulations that limit imports (licensing, SPS/TBT-type measures), triggering WTO safeguards, giving domestic aids, etc. Or, do the officials consider that the surge was not strong enough for its effects to be felt, and therefore, nothing was done?

Farmers (both subsistence and commercial farmers) and farm associations

- What do they think of the phenomenon of import surge?
- Did they react in any way, e.g. petition the government for response/relief?
- What measures were called for?
- What did the farm association do? Were the cases publicized in the media?

Importers of the products/traders/import associations

- What do they think of the import surge?
- Do they see the negative side? How would they "view" or quantify the negative effects?
- Or, do they only see the positive side, e.g. on the ground that imports have helped employment in factories and food security for poor consumers?

NGO/civil society views

- Same questions as above – their views? Why? How would they quantify the effects?

Research/academic community

- Was this an issue that attracted research interest in the country? In newspapers?
- Where are analyses, papers done?
- How would they conduct this type of research?

APPENDIX 5.2 IDENTIFICATION OF COMMODITY-SPECIFIC INJURY INDICATORS: THE CASE OF CHICKEN QUARTERS

Indicators which might be useful for measuring injury

Imported product (examples)	"Like" WTO	"Competitive" or vertically linked	"Substitutable" or horizontally linked	Input/output (other sectors)
Chicken leg quarters	Commercial broiler meat	Live birds	Beef, fish, pork, eggs, live animals	Feed
Economic Effects on:				
Producer	Changes in: • chicken production; • household income; • changing share of poultry sales in total household income; • employment	Changes in: • price of live birds	Changes in: • relative prices; • share of poultry in consumption	Changes in: • feed prices; • used capacity of feed mills; • employment in feed mills; • profitability of feed production
Processor	Change in: • sales; • prices; • profits/losses; • output; • market share; • employment; • productivity; • return on investments; • capacity utilization			
General indicators:	Imports and changing share of the total market			Employment in the transport sector
Food security impacts				
Household employment				
Rural incomes				
Gender				
Macro-indicators:				
Balance of payments				
Current account				
Exports of same product				

APPENDIX 5.3
TOOLS TO ANALYSE COMPETITIVENESS

Indicators which might be useful for measuring injury The cost of production data (see Step 7 bis) can be used to feed into various indices. While these tools might be useful for examining factors affecting the general competitiveness of an industry, it should be recognized that they may not be necessarily useful in clarifying the impact of an import surge. Calculation of some of the indices, on the other hand, may add to an understanding of the factors implicit in the vulnerability of a specific industry to an import surge. Hence caution should be used when using these tools.

1. Herfindahl Index and Concentration Index

These indices measure industry concentration and the intensity of competition in a market or, on the other hand, the degree of segmentation and market power (Tirole, 1988).

The **Concentration Index** is calculated as the percentage of the market (by quantity or value) that is controlled by the biggest three (CR3), or four (CR4) or five (CR5) firms operating in the market.

The **Herfindahl Index** is a more precise tool for measuring concentration. The Herfindahl Index is a measure of the size of firms in relationship to the industry and an indicator of the amount of competition among them. It is defined as the sum of the squares of the market shares of each individual firm. As such, it can range from 0 to 10 000, moving from a very large amount of very small firms to a single monopolistic producer. Decreases in the Herfindahl Index generally indicate a loss of pricing power and an increase in competition,

$$H=(S_1)^2+(S_2)^2+(S_3)^2+\ldots+(S_n)^2$$

whereas increases imply the opposite where S stands for the market share of each company.

Recommended data requirements:

1. Market share of the firms operating in the market, sector or industry.
2. Quantity and value of the good (imported or domestically produced) sold in each market. Time series of quantities and values of domestic production, consumption and imports.
3. Flows: estimation of the quantities under consideration (tonnes, kg, etc.).

Potential limitations:

- the usefulness of this indicator to detect monopolies is directly dependent on a proper definition of a particular market. Thus, it is important to accurately define the market, or the industry being analysed;
- this statistic does not take into account factors such as firm location. For example, firms may each have 20 percent market share, but may be located in five areas of the country, thus limiting any type of price competition. This constraint highlights the importance of proper use of mapping;
- the application of the Herfindahl Index requires a large amount of information. To be calculated it requires the knowledge of the market share of each firm. The same information is not required when calculating a Concentration Index.

2. Lerner Index

This index is used to investigate the extension of monopoly market power (Lerner, 1934; Tirole, 1988). The theoretical idea is that a firm that has market power can set the price over marginal cost.

$(p-mc)/p=-1/\varepsilon$ where p is price, mc marginal cost and ε is demand elasticity.

The Lerner Index takes values between 0 and 1. The higher is the value of the index, the larger is monopoly power. For firms in a purely competitive market, the Lerner Index is zero.

The index may be calculated at firms, market or industry level and at each stage of the value chain.

Recommended data requirements:

1. Cost of production based on the inputs that have been roughly summarized in the table presented in the cost of production section.
2. Quantity produced to calculate the average cost of production.
3. Wholesale, retail prices.

Potential limitation:

- in practice, the marginal cost, and hence the relative markup, is difficult to observe and has often been approximated by total cost of production or the average cost of production.

3. Indicators of comparative advantage

Coefficients (or indicators) of comparative advantage measure the performance of the domestically produced products which compete with imported products. These coefficients include net social profits (NSP), domestic resource cost (DRC) and social cost-benefit (SCB) ratios and are defined as follows:

$NSP = \Sigma_x P_x Q_x - \Sigma_i P^*_i Q_i - \Sigma_j P^*_j Q_j$ (NSP= E-F-G))
$DRC = \Sigma_j P^*_j Q_j / (\Sigma_x P_x * Q_x - \Sigma_j P^*_j Q_j)$ (DRC= G/(E-F))
$SCB = (\Sigma_j P^*_j Q_j + \Sigma_i P_i * Q_i) / \Sigma_x P^*_x Q_x)$ SCB= (F+G)/E

where P, Q are price and quantity; the subscript x, i and j, indicate output, tradable inputs and domestic factors.

1. The NSP is expressed in local currency and is an accurate indicator of comparative advantage. This measure can only be used to compare similar types of activities, such as alternative agricultural product projects competing for a given fixed resource. For agricultural production, resources are typically fixed only in the aggregate. The NSP is also one of the fundamental measures of profitability.
2. The DRC is the major indicator of comparative advantage. It is commonly used as a measure of comparison across the countries. This measure of comparative advantage ensures that the cut-off between efficient and inefficient activities always equals one. The DRCs cannot only be used to compare across countries but also across activities within a country. Given that domestic factor costs are placed in the numerator and tradable factors are placed in the denominator, the DRC formula makes it possible for an activity to appear more efficient by replacing some non-tradable factors with an equivalent value of tradable inputs. This substitution might be thought desirable by analysts who favour high-input activities, but it might also be thought undesirable by those who favour increased demand for local land and labour.
3. The SCB. Similar to the DRC, it is the only ratio which accurately replicates farming activities.

Recommended data requirements:

1. Import prices (c.i.f.), domestic price and official exchange rate (NSP, DRC, SCB).
2. Transaction costs, paying particular attention to transport costs (see appendix) (NSP, DRC, SCB).
3. Alternative market opportunities of the inputs. (NSP, DRC, SCB).
4. Estimates of opportunity costs or shadow prices for the inputs (NSP, DRC, SCB).
5. Major traded inputs and technological coefficients (NSP, DRC, SCB).
6. Border prices of traded inputs (NSP, DRC, SCB).

Potential limitations:

- give the length of the production-marketing-consumption chain (implying different stages at which a commodity can be evaluated) the selection of the appropriate domestic price is problematic;
- the border price should be adjusted for the transaction costs involved in delivering the product to the major market where it competes with local product;
- shadow prices and opportunity costs are not directly observable and need to be estimated.

4. Indicators of protection and policy distortion

Through the calculation of these coefficients and the comparison of domestic prices with foreign prices, the implied structure of taxation and subsidization and the divergence between incentives that are generated by policy and other incentives are revealed.

1. The Nominal Protection Coefficient (NPC) is the ratio of a products domestic price to its border price (defined as the price in the international market converted into local currency).
2. The EPC. This index is analogous to the NPC, except for the fact that value added determines returns to fixed factors.
3. The Producer Subsidy Equivalent (PSE) is the level of producer subsidy that would be necessary to replace the array of actual farm policies employed in the country, in order to leave farm income unchanged.

Recommended data requirements:

1. Import prices (c.i.f.), domestic price and official exchange rate (NPC, EPC, PSE).
2. Taxes and subsidies on outputs and on traded inputs (NPC, EPC, PSE).
3. Transaction costs, paying particular attention to transport costs (see appendix) (NPC, EPC, PSE).
4. Categorization of inputs into traded and non-traded inputs (EPC).
5. Technological coefficients for traded inputs in production and processing (EPC).
6. Total amount marketed to compute total transfer (PSE).

Potential limitations:

- give the length of the production-marketing-consumption chain (implying different stages at which a commodity can be evaluated) for which the selection of the appropriate domestic price is problematic;
- the border price should be adjusted for the transaction costs involved in delivering the product to the major market where it competes with local products.

5. Policy analysis matrix (PAM)

The policy analysis matrix (PAM) developed by Monke and Pearson (1989) is one of the approaches developed in a systematic way. It includes all data needed to calculate the PSE, NSP and DRC.

The PAM approach is based on estimation of budgets using market prices and social opportunity costs. Benefits, costs and profits are determined in a systematic way: first, using budgets derived through market prices, and second, using social opportunity costs. Inputs are subdivided into tradable and domestic. The table above shows the PAM approach. Matrix entries A, B and C are the sum of products of market prices (P) and quantities (Q) representing all of a production activity's outputs (with subscript x), tradable inputs (with subscript i) and non-tradable domestic factor inputs (with subscript j). Entries E, F and G use the same quantities but are valued at social opportunity costs or shadow prices (P*). The bottom row is the difference between the other

PAM

	Benefits	Cost		
	Gross revenue	Tradable inputs	Domestic factors	Net profit
Budget at market price	$A=\Sigma_x P_x Q_x$	$B=\Sigma_i P_i Q_i$	$C=\Sigma_j P_j Q_j$	D
Budget at social opportunity costs	$E=\Sigma_x P^*_x Q_x$	$F=\Sigma_i P^*_i Q_i$	$G=\Sigma_j P^*_j Q_j$	H
Divergences	I	J	K	L

two rows. The last column shows benefits minus costs. Thus, the PAM is a double-entry accounting system of identities, with no behavioural equations. The behavioural content of the PAM is embodied in the shadow prices used and in the interpretation of the matrix.

This approach allows the determinants of comparative advantage to be explicitly traced to specific elements of the PAM. The presentation of data and results using PAM allows a better comparison among different indicators.

The PAM allows for instance to compute directly the comparative advantage indicators as:

$NSP = \Sigma_x P_x Q_x - \Sigma_i P^*_i Q_i - \Sigma_j P^*_j Q_j$ (NSP= E-F-G))

$DRC = \Sigma_j P^*_j Q_j / (\Sigma_x P_x * Q_x - \Sigma_j P^*_j Q_j)$ (DRC= G/(E-F))

$SCB = (\Sigma_j P^*_j Q_j + \Sigma_i P_i * Q_i) / \Sigma_x P^*_x Q_x)$ SCB= (F+G)/E

APPENDIX 5.4
THE CASE OF PIG AND PIG MEAT INDUSTRIES: AUSTRALIAN SAFEGUARD ACTION AGAINST IMPORTS

INQUIRY REPORT NO. 3 CONDUCTED BY THE AUSTRALIAN PRODUCTIVITY COMMISSION, 11 NOVEMBER 1998

This inquiry report was conducted to determine whether safeguard action was warranted against imports of meat of swine, frozen, falling with tariff subheading 0203.29 of the Australian Customs Tariff. The Commission is to report on 1) whether the circumstances are such that safeguard measures would be justified under the WTO Agreement; 2) if so, what measures would be necessary to prevent or remedy serious injury and to facilitate adjustment; and finally 3) reference the question of the factors affecting the profitability and competitiveness of the domestic pig farming and pig meat processing industries, specifically examining the extent to which each factor influences industry profitability and competitiveness.

The study followed the following steps:

1. Agreement on the commodity to be investigated; document the increase in imports

   The industry solicited the assistance of the Productivity Commission; pig meat imports were at relatively low levels until 1996 at which time they increased by 173 percent. The appropriate period for analysis was considered from 1995 through 1998 (publication of the report).

2. Identification of the like, competitive and substitutable products

   The domestic industry producing like or directly competitive products comprises pig producers as well as producers of primal pork cuts (that is, specialist pig abattoirs and boning room operators).

3. Stakeholder surveys conducted to identify the impact of the surges on economic agents (producers, consumers, etc.)

   Evidence was solicited from individual pig growers, abattoir operators and processors. In addition evidence was reviewed from stakeholders opposing the imposition of a safeguard mechanisms – the Government of Canada, the Canadian Pork Council and Meat Council. In addition, comments were received from the sugar corporation, farmer associations and policy-makers.

4. Collection of data on production, trade, prices and policy measures for the analysis

   Data collected and analysed. In particular, examine how imports in just one segment of the pig meat market might affect producer prices and output. The degree to which imports actually affect pig prices depend on the price of imports relative to the price that would prevail in the absence of imports, the supply response by pig producers to price changes, the strength of consumer demand for other parts of the pig and the substitutability of imported pork for the local product. There is a range of other factors that might affect pig meat prices, including changes in domestic supply, changes in costs (for example, grain prices, other meat prices, which can affect consumer demand for pork), and changes in demand, including export demand.

5. Identification of the domestic industry and the related market segments that are injured or threatened

*"An imported Article is **directly competitive** with a domestic Article at an earlier or later stage of processing, and a domestic Article is **directly competitive** with an imported Article at an earlier or later stage of processing if the importation of the Article has an economic effect on producers of the domestic Article comparable with the effect of importation of articles in the same stage of processing as the domestic article. According to the United States International Trade Commission, in certain safeguard cases involving agricultural goods, producers at all stages should be included as part of the domestic industry".*

6. Identification and estimation of injury indicators for the domestic industry and the market segments

Injury indicators: imports and market share, sales volume, sale prices, production, productivity and capacity utilization, profits and losses, employment.

7. Establishing causality between injury and imports

Price analysis: evidence from participants suggested that the price paid for locally-produced legs (and other leg cuts) in September 1998 was about 5 percent above the comparable import price. It was estimated that, all else constant, a fall in the domestic price of boned legs from around 560 c/kg to around 440 c/kg would roughly convert to a 20 c/kg fall in the price of a dressed carcass. In addition, import prices also tend to drive down the price of these cuts and the price of pigs. It appeared that most of the reaction to import competition (and thus most of the serious injury) was in the form of lower prices rather than reduced production.

In addition, econometric analysis was undertaken that failed to produce clear-cut results. Granger and Sims (pairwise) causality models as well as a more general Vector Autoregressive (VAR) model designed to capture the effects of several key factors were used.[1] However, another analysis found that imports of pig meat had affected pig saleyard prices significantly. For example, one study found that an additional 1 000 tonnes of imports of pig meat would push down producer prices by just under 11 c/kg.

8. Non-attribution analysis: establishing that injury is the result of the import surge only

Examine the role of other factors – factors that affect the demand for pork and factors that affect the domestic supply of pork:
Demand – consumer tastes, other meat prices, export demand
Supply – domestic production, productivity, input costs
Other – exchange rates, market power of user industries.

References

Conforti, P. & Rapsomanikis, G. 2005. Market integration, price transmission and import surges. FAO Import Surge Project Working Paper No. 6.

De Nigris, M. 2005. Defining and Quantifying the Extent of Import Surges: Data and Methodologies. FAO Import Surge Project Working Paper No. 2.

Granger, C.W.J. 1988. Some recent developments in the concept of causality. Journal of Econometrics. 39, 199-211.

Grethe, H. & Nolte, S. 2005. Agricultural Import surges in developing countries: exogenous factors in their emergence. FAO Import Surge Project Working Paper No. 5.

[1] See Granger (1988); Sims (1980); and Conforti and Rapsomanikis (2005).

Grubel, H.G. & Lloyd, P.J. 1975. Intra-industry trade: the theory and measurement of international trade in differentiated products. London, Macmillan.

Lerner, A.P. 1934. The concept of monopoly and the measurement of monopoly power. Review of Economic Studies. 1(3) pp. 157-175.

Monke, E.A. & Pearson, S. 1989. The policy analysis matrix for agriculture development. Cornell University Press, Ithaca New York.

Mosoti, V. & Sharma, R. 2005. The interpretation of various import surge-related concepts and definitions in the WTO legal text. FAO Import Surge Project Working Paper No. 3.

Mucavele, F.G. 2000. Analysis of comparative advantage and agricultural trade in Mozambique. Technical Paper no. 107, Faculty of Agronomy and Forestry Engineering, Eduardo Mondlane University.

Sharma, R. 2005a. Overview of reported cases of import surges from the standpoint of analytical content. FAO Import Surge Project Working Paper No. 1.

Sharma, R. 2005b. Extent and Impact of Food Import Surge in Developing Countries: An Analytical Approach and Research Methodology for Country Case Studies. FAO Import Surge Project Working Paper No. 7.

Sims, C. 1980. Comparison of Interwar and Postwar Business Cycles: Monetarism Reconsidered, American Economic Review. vol. 70(2), pages 250-57, May.

Tirole, J. 1988. The theory of industrial organization. Cambridge USA: MIT University Press.

Tsakok, I. 1990. Agricultural price policy: a practitioner's guide to partial – equilibrium analysis. Cornell University Press.

Westlake, M. 2005. The transmission of import surges in domestic markets. FAO Import Surge Project Working Paper No. 4.

PART 2

IMPORT SURGES IN DEVELOPING COUNTRIES: EVIDENCE AND INSIGHTS FROM CASE STUDIES

PRESENTATION OF THE CASE STUDIES

6

6.1 Introduction

Surges in agricultural imports and their perceived negative effects on producers are sensitive economic and political matters especially in developing countries. One reason for this sensitivity is that the complaints from those who lose often outmatch the voices of the beneficiaries. Indeed, job losses, closure of firms and abandoned farms are some of the usual visible signs of the damage done by excessive imports and these problems may lead to social unease. Developing countries' governments wanting to avoid these difficulties look for interventions to reduce the negative impacts on the affected sector. There has been however no guidance on what the appropriate interventions should be in detecting the presence and assessing and alleviating the impacts of import surges. The need for such guidance is pressing as the incidence of import surges, which many observers believe are the consequences of tariff reduction and domestic market liberalization following the WTO AoA, becomes more and more frequent. One way to address this need is to gather and share information about and lessons learned from import surges that some countries have experienced in the past. It is this context that prompted FAO to examine past import surges in selected developing countries through case studies for selected commodities.[1]

This second part of this book, *Part II* is aimed to highlight and synthesize the findings in these case studies, especially on the identification and the assessment of import surges and on the government's response to the surges. The materials are drawn from FAO briefs and working papers. Part II has five chapters and is organized as follows. After this chapter introducing the countries and commodities in the case studies, Chapter 7 summarizes the analysis identifying the main sources of import surges and reveals the difficulties in disentangling them. Chapter 8 examines some of the consequences of import surges in developing countries and focuses on specific impact indicators and the effects on various stakeholders. Chapter 9 analyses government interventions in dealing with import surges to explain the rationale behind their decisions. Chapter 10 summarizes the content of this book and outlines specifically the findings in the case studies on import surges in developing countries. It also discusses the implications of the dilemma facing those countries in choosing between liberalizing the market and trade to improve total welfare and protecting the local agriculture sector to support small farmers and agro-industries.

6.2 Case studies: the countries and commodities

The choice of the countries and commodities in the FAO case studies stemmed from the concept that the import competing sectors of these countries were among those who were thought to be the most vulnerable to import surges. The commodity selection was based on statistical analysis indicating some prevalence of import surges and on the importance

[1] See various FAO briefs and working papers listed in the reference.

of the commodity in the country's production or consumption. Discussions with local industry stakeholders have helped narrow the choice of the commodities (sectors) in the investigation.

Table 6.1 presents the list of the developing countries, the period that the investigation focused on and the commodities selected in the case studies. For some countries, the table also shows rough estimates of the number of import surge occurrences.

A brief introduction to the selected countries and commodities based in Table 6.1 is helpful for the rest of the analysis.[2]

6.2.1 Cameroon

Agriculture plays a significant role in Cameroon's economy and at the time of the investigation in 2004, agriculture contributed to more than 40 percent of the country's GDP. Agriculture also continues to employ more than 60 percent of the workforce. Cameroon was one of the countries which witnessed the most prevalent and frequent import surges and was therefore suitable for country case studies. Poultry meat, rice and vegetable oils were identified as the most affected and were selected for the case studies. Food import surge in Cameroon was a very sensitive economic policy and political issue, attracting considerable attention as evidenced by increasing and controversial national NGO and newspaper reports. The Government of Cameroon and industry stakeholders through their monthly meetings (notably the quarterly meetings between local poultry farmers and other poultry stakeholders with the Ministry of Livestock and the monthly meetings of palm oil producers/processors with the ministries of trade, agriculture and finance) had expressed continuing concern about the impact of these rising food imports on the local industries and rural communities.

TABLE 6.1
List of selected countries and commodities with the estimated number of the incidence of import surges

Countries	Commodities	Estimated number of import surge incidences
Cameroon (1999-2004)	Poultry	3
	Rice	3
	Vegetable Oils	2
Côte d'Ivoire (1996-2004)	Poultry	at least 2
	Rice	at least 4
	Sugar	at least 2
Ghana (1998-2004)	Poultry	at least 2
	Rice	at least 5
	Tomato paste	at least 5
Honduras (1991-2005)	Rice	at least 2
Jamaica (1980-2005)	Dairy	at least one
	Poultry	at least one
	Onions	at least one
Kenya (1973-2003)	Dry milk powder	at least 5;
	Maize	at least one
	Sugar	at least 2
Malawi (1980-2004)	Dairy	at least 2
	Maize	at least 2
	Sugar	at least 3
Mozambique (2001-2004)	Poultry meat	2
Mozambique (2002-2004)	Vegetable oils	3
Philippines (1999-2004)	Onions	n.a.
	Tobacco	n.a
Sri Lanka (1985-2005)	Dairy products	at least 5
The United Republic of Tanzania (1997-2004)	Dairy	at least 3
	Maize	at least 2
	Rice	at least 3

Source: FAO (2005)

[2] Besides, the FAO policy briefs, other sources of information employed in the description of case studies include FAOSTAT; Paper on Commodity Proble, (FAO 2003); Synthesis of country case studies in agricultural trade and food security (FAO, 2000). Additional information were drawn also from Mosoti and Sharma (2005). Some country specific statistical figures are from Word Bank's Word Development Indicators.

6.2.2 Côte d'Ivoire

The economy of Côte d'Ivoire depends to a large extent on the agricultural sector, including cocoa production. Small-scale family farms have been the dominant source of agricultural output, especially staple food (grains and roots), while large commercial plantations have been mostly prevalent in cash crops such as bananas, rubber and pineapple. Despite attempts by the Government to diversify the economy, Côte d'Ivoire has remained largely dependent on agriculture and related activities, which engaged roughly 68 percent of the population. Social and political tensions, since 2002, have constrained agricultural output and have contributed to a 46 percent rise in imports of goods and services from XOF 2 234 million to XOF 3 262 million in 2005. Trade policy has gone through several milestones: protectionism (1960-1984), liberalization (1984-1988), return of protectionism (1988-1990), and return to liberalization since the mid-1990s to the present.[3]

The import surge phenomenon attracted enormous attention in Côte d'Ivoire in part because of stakeholders' concerns that increases in imports could adversely impact on domestic industry and competitiveness. Three commodity groups, rice, poultry and sugar, were selected for evaluation in part on the basis of a statistical analysis by FAO indicating prevalence of the surge phenomena and discussions with local industry stakeholders.

6.2.3 Ghana

Agriculture has remained the mainstay of Ghana's economy, contributing to about 40 percent of GDP, about 35 percent of foreign exchange earnings and 60 percent of employment. Over 80 percent of the rural populace has their main livelihood activities centred on agriculture.

Import surge cases for rice, poultry and tomato paste were identified for the case studies. These commodities are consumed by a majority of Ghanaians both in rural and urban communities. Import surges of poultry products rose to a national debate during which, many stakeholders pressed policy-makers to raise tariffs, claiming that import competition threatens local industries. Rice is an important cash crop in the communities in which it is produced, besides being an important food staple for both rural and urban communities across the country. Tomato production in Ghana is mainly a smallholder activity and its distribution throughout the year is markedly seasonal. There were rising concerns about the increasing imports of canned tomatoes (mainly tomato paste and preserved tomatoes) from Italy and other countries.

6.2.4 Honduras

Honduras is a small and poor country whose economy depends heavily on agriculture. Official statistics show that agriculture is among the largest employment providers. Half of the population, estimated at 7 million, lives in rural areas where the incidence of poverty reached 70 percent and of extreme poverty 61 percent. Agriculture in Honduras has experienced significant policy changes since the early 1990s. The traditional Honduran staples include rice but are mainly based on corn and wheat. Rice was chosen in the study because rice was considered for decades not only the most profitable of the basic grain crops from the perspective of farming, but also as a cash crop for rural farmers.

Agriculture was previously perceived as the supplier of basic staples for the rural and urban population. Domestic production of maize, beans and rice were protected from the world market by tariffs and non-tariff barriers. However, in the early 1990s, as in most Latin American countries, the Government of Honduras embraced an aggressive economic liberalization model for the agricultural sector. Tariffs were reduced, unilaterally at first and then further as the country joined the WTO in 1994, and more recently with a Central American Customs Union (Unión Aduanera Centroamericana) and in 2005 with a free trade agreement with the Dominican Republic and the United States (DR - CAFTA). Trade

[3] Côte d'Ivoire is a member of the Union économique et monétaire ouest-africaine (UEMOA), and the Economic Community of West Africa (ECOWAS). It was also one of the signatories of the African, Caribbean and Pacific Group of States (ACP) partnership agreement that calls for trade liberalization between the ACP and the European Community and the end of the system of non-reciprocal trade preferences. Côte d'Ivoire has also been a beneficiary of the African Growth and Opportunity Act initiative of the United States.

liberalization was accompanied by deregulation of interest rates, exchange rates and foreign currency allocations, while price controls were banned by law. Credit, research and technical assistance institutions were dismantled and opportunities were given for the birth of private, more effective and economically rational systems, to deliver the services required by farmers. In some cases, trade liberalization resulted in substantial increases in agricultural imports, which affected domestic markets.

6.2.5 Jamaica

Jamaica is a low-income country in the Caribbean where agriculture, though relatively small compared with tourism, continues to play an important role in the economy. Within the period of study, in 2002, agriculture contributed to about 6 percent of the country's GDP. Jamaica's trade policy has been designed and implemented within the framework of the Caribbean Community and Common Market (CARICOM). Through its participation in CARICOM, Jamaica concluded preferential trade agreements with Colombia, Costa Rica, Cuba, Dominican Republic and Venezuela. Jamaica's exports benefit from non-reciprocal preferential trade arrangements offered by a number of developed countries and it faces the challenge of adjusting to an environment in which preferences are being increasingly eroded.

Since 1998, Jamaica has taken steps to encourage trade. These have included customs modernization and computerization programmes, which have resulted in the reduction of the duration of customs clearance. Jamaica has also ceased to use reference prices for fixing applied tariff rates and has adopted the WTO definition of transaction value for customs valuation. Tariffs are the main instruments of border protection and an important source of Jamaica's fiscal revenue. In the context of reductions in CARICOM's common external tariff, Jamaica's simple average MFN tariff fell to 8.6 percent in 2004. However, tariffs on certain vegetables increased from 40 to 100 percent. Average tariff protection for agricultural products (WTO definition) has remained substantially higher than for non-agricultural products: 18.1 and 6.7 percent, respectively. In several cases, tariff escalation is negative from raw materials to semi-processed goods, which may inhibit the production of intermediates. Virtually all imports from CARICOM Members enter Jamaica duty free.

6.2.6 Kenya

Kenya is one of the developing countries where crop and livestock sectors have played a significant role in the economy; they account for about 25 percent of the GDP and support about 80 percent of the country's population. Powdered milk, sugar and maize are key commodities contributing to the food security and the livelihoods of the population especially those living in rural areas, and were chosen to be part of the case studies. Surges of imports for these commodities may have affected stakeholders and the rural economy at large significantly. The imports coincided with the series of significant cuts in tariff following the country's move towards freer trade. The surges also happened during the time when the grip of marketing boards for dairy and maize loosened and the domestic market reforms took place for these commodities.

6.2.7 Malawi

Malawi has been classified as one of the poorest countries in the world with 65 percent of the population, or roughly 7 million people, living below the poverty line. Its economy relies on agriculture and in 2003, for instance, agriculture in Malawi contributed to more than one-third of the country's GDP and more than 80 percent of foreign exchange earnings. Agriculture also continues to generate more than 90 percent of employment in rural areas. There have been arguments against the speed of trade reforms in Malawi, with many contending that the unmanaged nature of trade liberalization has led to import surges with consequential adverse effects on domestic production. Such import surges drew special attention and three commodities, namely, maize, sugar and dairy products have been chosen for the study because of their importance for the livelihood of stakeholders especially those living in rural areas.

6.2.8 Mozambique

Despite sustained economic growth in the last several years, Mozambique has remained a least developed

country with a high poverty rate especially in rural areas. Agriculture continues to be an important source of employment and a significant contributor to the economy; it employed 80 percent of the country's workforce and accounted for more than 20 percent of GDP in 2005. Poultry and vegetable oils were chosen for the case study because of their prominent role in food security and food production and that informal investigation also pointed to import surge between 2001-2004. Poultry and vegetable oils have been chosen for the case studies. In 2001, livestock contributed to about 10 percent of the value of agricultural production and, according to the Agricultural and Livestock Census (CAP, 2000), poultry was important for nearly 70 percent of rural households, with backyard production of live birds accounting for 97 percent of the total number of chickens. Vegetable oil production in Mozambique satisfied only 20 percent of the amount of domestic demand but the sector kept growing with reforms on land policies and market liberalization under way.

6.2.9 The Philippines

More than 70 percent of the Philippines' population continues to live in rural areas and agriculture plays an important role in the economy, contributing about 18 percent to GDP. During the investigation period, both the onion and tobacco crops were very important products for rural livelihoods in the Philippines. Onion in particular is also a staple seasoning in the daily diet of the population. Onion farmers often claimed that cheap imports, mostly from China, had reduced the prices of domestically produced onions, particularly because their timing coincided with the peak harvest period for local produce. Meanwhile, tobacco farmers were concerned about the volume of imports which exceeded local production, resulting in a decrease in their market share and threatening their livelihoods.

The views of importers and traders differed from those of farmers on the onions and tobacco imports. Onion importers claimed that there was only limited increase in import volumes and the timing did not coincide with the local harvest period. Also, importers insisted that onion imports were reportedly distributed to a different segment of the market, supplying mainly hotels, restaurants and food chains and should not affect the local producers. Likewise, tobacco importers believed domestic production does not meet the quality requirements of manufacturers. Locally produced tobacco and imported leaf were considered different products, each with a distinct market. Importers claimed that the increase in imports was therefore attributed to the domestic sector's low quality products and lack of efficiency. These differing claims and views were among the important reasons that motivated the investigation within the FAO case studies.

6.2.10 Sri Lanka

Sri Lanka is a low-income developing country with agriculture accounting for about 20 percent of the country's GDP and employs about 40 percent of the workforce. Dairy products were chosen in the case study because they are important in the domestic consumers' diet as well as for the surge in imports. Average levels of consumption of milk and milk products have grown steadily, rising over time and across income categories. In the face of slow growth in domestic supply, this rising demand had been met by imports, which account for most of the milk products consumed in the country. About 90 percent of the dairy import has been powder milk but includes butter, cheese, yoghurt and other milk by-products. Dairy imports, especially milk powder imports, have grown even faster.

6.2.11 The United Republic of Tanzania

A low-income developing country, the United Republic of Tanzania's economy still relies heavily on agriculture which contributed about 50 percent to the country's GDP. Agriculture in the United Republic of Tanzania provides employment for 80 percent of the workforce. Dairy products, maize and rice were selected for the case studies because of their important role in food security and poverty alleviation for the country especially in rural areas. Preliminary investigation also indicated that imports of these three commodities have risen since the 1990s, especially between 1997-2004. The selection was influenced at that time by the stakeholders' concerns, especially those of the farmers, on the possible adverse impact of these increases on import volumes and the Government response and intense media coverage of

the issue. The United Republic of Tanzania is involved in many regional trading arrangements such as the Common Market for Eastern and Southern Africa (COMESA), the East African Community (EAC) and the Southern African Development Community (SADC). The liberalization of its agriculture sector started in the late 1980s and has continued and many suspect that the liberalization was the major sources of the import surge.

6.3 Concluding remarks

Examining agricultural import surges in developing countries poses great challenges for analysts because of the lack of reliable information, preventing a complete analysis and the lack of precision and uniformity in the terminology and method, impeding useful comparison among various types of surges across countries and commodities. The selection of the developing countries targeted in the case studies was also a challenge but the prominence of the import surges and the availability of basic information have guided the choice.

References

CAP. 2000.

FAO. 2000. *Synthesis of the country case studies, in agriculture, trade and food security: issues and options in the WTO negotiations from the perspective of developing countries. Volume II, Country Case Studies*. FAO, Rome, 2000.

FAO. 2005. Extent and impact of food import surges in developing countries: An analytical approach and research methodology for country case studies. FAO Import Surge Working Paper No. 7, Rome, May 2005.

FAO. FAOSTAT accessed online. www.faostat.org.

FAO. 2003. Various Papers on Commodity Committee Problems (64th Session). http://www.fao.org/unfao/bodies/ccp/ccp64/ccp64-e.htm

FAO. 2006. Import Surges: What are they and how can they be identified? FAO Briefs on Import Surge Issue no.1 October.

FAO. 2006. Import Surges: What is their frequency and which are the countries and the commodities most affected? FAO Briefs on Import Surge, Issue no.2 October.

FAO. 2006. Import Surges: What are their external causes? FAO Briefs on Import Surge, Issue no.3 November.

FAO. 2006. Import Surges: What are the contributing domestic factors? FAO Briefs on Import Surge, Issue no.4. October.

FAO. 2006. Import Surges: Institutional requirements for the implementation of a Special Safeguard Mechanism. FAO Briefs on Import Surge, Issue no.5. November.

FAO. 2006. Import Surges: Injury: issues and identification. FAO Briefs on Import Surge, Issue no.6. November.

FAO. 2006. United Republic of Tanzania: rice, maize and dairy. FAO Briefs on Import Surge: Country case study no.1 November.

FAO. 2006. Malawi: Maize, sugar and dairy products. FAO Briefs on Import Surge: Country case study no.2.

FAO. 2006. Mozambique: Vegetable oils. FAO Briefs on Import Surges: Country case study no. 3.

FAO. 2006. Cameroon: Poultry, rice and vegetable oils. FAO Briefs on Import Surges: Country case study no. 4.

FAO. 2006. Ghana: Rice, poultry and tomato paste. FAO Briefs on Import Surges: Country case study no. 5.

FAO. 2006. Jamaica: Poultry, dairy products and onions. FAO Briefs on Import Surges: Country case study no. 6. November.

FAO. 2007. Kenya: Dry milk powders, sugar and maize. FAO Briefs on Import Surges: Country case study no. 7. February.

FAO. 2007. Sri Lanka: Dairy products. FAO Briefs on Import Surges: Country case study no. 8. February.

FAO. 2007. Philippines: Onions and tobacco. FAO Briefs on Import Surges: Country case study no. 9. February.

FAO. 2007. Mozambique: Poultry meat. FAO Briefs on Import Surges: Country case study no. 10. February.

FAO. 2007. Honduras: The extent and impact of Import surges in Honduras: The case of Rice. FAO Briefs on Import Surges: Country case study no. 11. February.

FAO. 2007. Côte d'Ivoire: Insights on rice, poultry and sugar imports into Côte d'Ivoire. FAO Briefs on Import Surges: Country Case Study no. 12. February.

FAOSTAT

Government of Cameroon. Various ministerial sources

Government of Côte d'Ivoire. Direction des statistiques douanières

Government of Ghana. Ministry of Agriculture and Fisheries

Government of Ghana. Ministry of Trade and Industry

Government of Honduras. Ministry of Agriculture

Government of Jamaica. Ministry of Agriculture

Government of Malawi. Ministry of Agriculture

Government of Mozambique. Ministry of Finance. Mozambique Customs.

Government of Philippines. Ministry of Finance.

Government of Sri Lanka. 2007. Customs Department Publications.

Government of the United Republic of Tanzania.

Mosoti, V. & Sharma, R. 2005. *The Interpretation of various import surge-related concepts and definitions in the WTO legal texts*, FAO Import Surge Working Paper No. 3, FAO, Rome, May 2005.

World Bank. World development indicators.

Identifying import surges and their causes in developing countries

7

7.1 Overview of the identification process

The analytical approach spelled out in the previous chapter was implemented to identify an import surge and determine its likely effects in selected developing countries. This chapter summarizes the findings in the FAO studies of the identification of import surges and their sources to provide insights on the incidence of import surges in developing countries. Table 7.1 summarizes the results of the investigation in the selected countries and highlights that both internal (e.g. supply shocks) and external sources (e.g. dumping in the international market) have been reported as the source of the surges. (Insert Table 7.1 here)

The three annexes (Annex 7.1, 7.2, 7.3) at the end of this chapter offer additional illustrations based on early cross-country studies on import surges especially on specific commodities such as dairy products and poultry.[1]

The analysis in the FAO country case studies follows the methods and instructions presented in Chapter 5, and these instructions were adjusted to match the data and resource availability in each country. Two main groups of methods of identification of import surges are employed. The first identification method consisted of comparing the import volume with a three-year moving average and defined an import surge as a 30 percent positive deviation of import volume from the three-year moving average[2]. The second group of identification method consists of comparing the volume and value of imports with the trigger volumes and prices calculated on the basis of the SSG provisions of the WTO AoA, even as the trigger level varies across countries.[3] Analysts sometimes relied on the comparison of the ratio of imports with consumption or production over time, though this method is least used.

Besides, the determination of the sources of agricultural import surges relied on correlation analysis between the import volumes and the sources of import surges when data were available. But in many cases the lack of reliable information often precluded rigorous analyses on the determination of the import surge's sources and of the share of responsibility of each individual source leading to the surge. This is the reason why the process of identifying the import surges and their causes had to rely on, or be corroborated by, the information from the stakeholders' interviews.

[1] More illustrations can be found in De Nigris (2005), Grethe and Nolte (2005).

[2] The choice of the volume and time thresholds may have a significant effect on the determination of the existence of an import surge. Indeed, previous FAO analysis used a five-year moving average, which was found to generally increase the number of import surges (by better smoothing out data series compared with a three-year period. Needs further explanation).

[3] These provisions allow countries to apply safeguard measures in case imports exceed a specific trigger level, related to the actual level of average imports over the preceding three years, to the share of imports in domestic consumption, and to the growth in domestic consumption.

TABLE 7.1
Sources of import surges in selected countries

Countries	Commodities	Demand shock	Supply shock	Trade policy reforms (trade liberalization	Domestic Market liberalization	Fluctuation of exchange rate	Food aid	Distortions from abroad (e.g. dumping)	Other sources (mentioned by stakeholders)
Cameroon (1999-2004)	Poultry			yes		yes			
	Rice			yes		yes			
	Vegetable Oils			yes		yes			
Côte d'Ivoire (1996-2004)	Rice			yes	yes	yes			lacking infrastructure, civil strife
	Poultry			yes	yes	yes			lack of infrastructure civil strife
	Sugar			yes	yes	yes			lack of infrastructure, civil strife, porous border
Ghana (1998-2004)	Rice		yes			yes		yes	porous border
	Poultry		yes			yes		yes (subsidy on feed)	
	Tomato paste		yes			yes		yes	
Honduras (1991-2005)	Rice		yes		deregulation (abolition of the marketing board)		yes	yes (lower world prices)	
Jamaica (1980-2005)	Dairy					yes		yes	elimination of subsidies on imported inputs; lack of investment in production
	Poultry					yes		yes	
	Onions							yes	

Kenya (1973-2003)	Dry milk powder	yes		yes	yes				compliance to regional trading arrangement
	Maize								cross-border (undocumented) trade, untimely import
	Sugar		yes						cross-border (undocumented trade), untimely import
Malawi (1980-2004)	Dairy		yes	yes					
	Maize	yes		yes					
	Sugar								
Mozambique (2001-2004)	Poultry meat		yes (AI)	yes (tariff reduction)	yes	yes		yes (stock of Brazilian poultry in Saudi Arabia)	underinvoicing of import
Mozambique (2002-2004)	Vegetable oils		yes	yes (tariff reduction)	yes	yes	yes (monetized food market)		
Philippines (1999-2004)	Onions		yes	yes	yes	no		yes (low priced onion from China)	lack of infrastructure, high transaction costs
	Tobacco		yes	yes	yes				lack of infrastructure, high transaction costs
Sri Lanka (1985-2005)	Dairy products		yes, increased feed price	yes (tariff cuts especially for milk powder)				milk subsidizing OECD	civil strife increased feed price
The United Republic of Tanzania (1997-2004)	Dairy	x (FDI)		x	x				
	Maize			x	x				
	Rice			x	x				

7.2 Incidence of import surges in selected countries

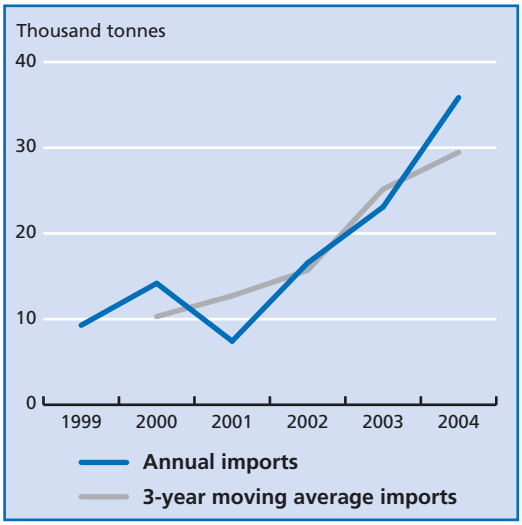
7.2.1 Cameroon: poultry, rice, vegetable oil

Cameroon experienced prolonged and persistent surges for poultry, rice and vegetable oil imports. From 1999 to 2004, poultry meat imports into Cameroon had trebled (Figure 7.1). This was despite a drop in 2001 due to the government ban on meat import from Europe because of dioxin contamination. During the same period, while domestic rice production remained fairly stable, the importation of rice doubled from 152 000 to 301 000 tonnes. Besides, vegetable oil imports increased from 7 280 to 33 944 tonnes. The occurrence of import surges, confirmed through data analyses, was supported by an informal survey of various stakeholders. While government officials and traders had not viewed poultry meat import trends as harmful for the country, the poultry farmers and their association considered the poultry meat import as the root cause of their production and marketing problems, especially the declining sales and profits. For vegetable oils, stakeholders shared the same concern that import surge had been harming the domestic sector. Rice producers were also worried but they attributed the actual problems facing rice production and marketing in the country to the lack of clarity in the government policy in the sector. Rice productivity had been declining as the liberalization of the sector and the limited access to inputs was often cited as its cause.

7.2.2 Côte d'Ivoire: rice, poultry, sugar

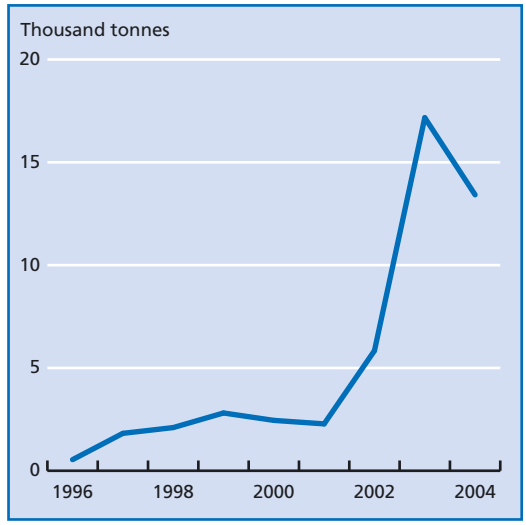
Statistical analysis, based on a 30 percent positive deviation from a three-year moving average, showed that rice imports surged in 1997, 1998, 2001 and 2002. Import surge in rice attracted considerable attention in Côte d'Ivoire due in part to stakeholders' concerns that the increases in imports had adversely affected domestic industry and competitiveness (Government of Côte d'Ivoire, Direction des statistiques douanières). Between 1997 and 2004, rice imports increased at an annual rate of 6 percent, from 469 667 to 715 379 tonnes. A significant surge in rice import was recorded in 2001, where imports reached 646 700 tonnes, a 47 percent increase over the previous year. Côte d'Ivoire imported rice from Thailand (28 percent on average of total imports between 1997 and 2003), China (20 percent) and

FIGURE 7.1
Cameroon poultry meat import



Source: Government of Cameroon

FIGURE 7.2
Côte d'Ivoire poultry meat imports



Sources: Direction des statistiques douanières

India (16 percent). Nearly 90 percent of imports consisted of broken rice, with imports doubling from 15 to 30 percent broken rice in five years.

Poultry imports rose sharply from 1 815 tonnes in 1997 to 17 226 tonnes in 2003 before declining slightly to 13 000 tonnes in 2004 (see Figure 7.2). Between 2001 and 2003, imports increased by more than 650 percent. The identification of import surges, based on deviations from a three-year moving average, showed that surges for poultry occurred in 1997, 1998, 1999, 2002, 2003 and 2004. Imports in 2005 were down to 6 300 tonnes after the Government introduced a XOF 1 000 /kg import tax.

Import surges for sugar were mainly restricted to refined sugar and other sweeteners. Imports of refined sugar grew by 15 percent annually between 1996 and 2003, while imports of raw sugar declined from 5 500 to 27 tonnes in 2003. Based on a 30 percent deviation from a three-year moving average, sugar import surges occurred in 1998 and 2002. Disaggregated figures showed that while both refined sugar and raw sugar imports contributed to the 1998 surge, imports have been dominated since then by refined sugar. Imports of raw sugar began to decline in 1998, mainly as a result of the rise in domestic production following some renewed investment in the sector. The sugar sector has been regulated through administered prices and an import surcharge (*taxe de péréquation*) levied to prevent imports entering at prices below the reference price (the value of the reference price was established at about the XOF 354 226 (the equivalent of USD 609 per tonne in 2003).

7.2.3 Ghana: poultry, rice, tomato paste

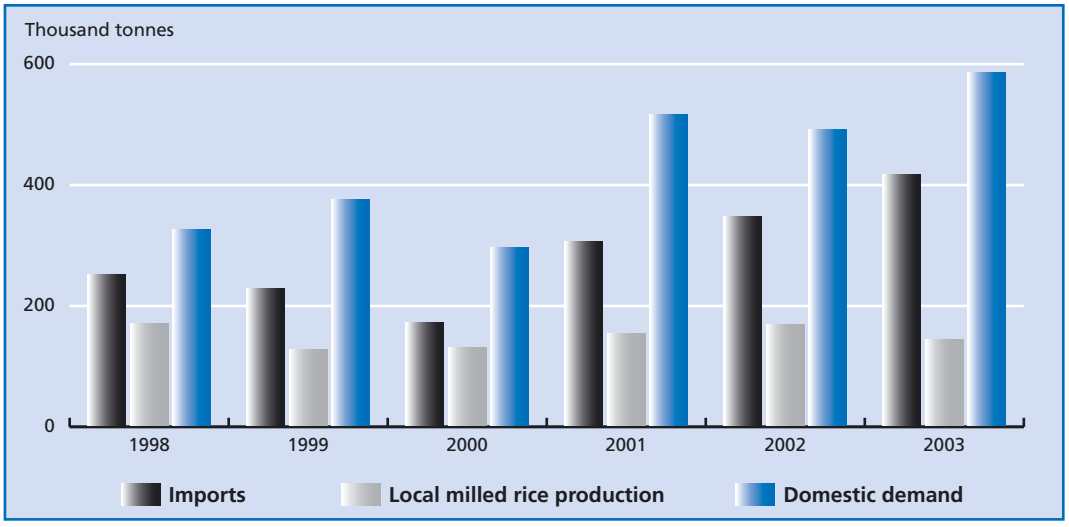
Based on volume triggers under the SSM, poultry import surges occurred in 2001 while based on a 30 percent deviation from a three-year moving average, surges occurred also in 2002 and 2003. National poultry inventories according to Ministry of Food and Agriculture of Ghana (MOFA) figures showed a 52 percent increase, from 17 to 26 million birds over the same period, while meat production increased by 66 percent from 13 000 to 21 000 tonnes. However, some stakeholders in the poultry industry were concerned that these official figures were highly inflated, and could not be useful in assessing the impact of import surges on domestic markets.

Similarly for rice, based on the methodology established in WTO for the implementation of SSG against disruptive import surges, volume triggers, based on a three-year moving average were exceeded in 2002. Over the study period, a significant rise of imports was noted, from almost 250 000 tonnes in 1998 to 415 150 tonnes in 2003, an increase of nearly 70 percent. Local output in milled rice equivalent stagnated around 150 000 tonnes per year in the study period. Figure 7.3 shows rice production and import. Domestic rice accounted for 43 percent of the domestic market in 2000, but this fell to 29 percent by 2003. Ghana imported rice from the United States (33 percent on average of total imports between 1998 and 2003), Thailand (30 percent), Viet Nam (17 percent), China (12 percent) and Japan (8 percent). Rice importation has been a highly concentrated business with five major importers accounting for more than 75 percent of imports. Stakeholders noted that this industry concentration increased further between 1998 and 2004.

Tomato paste can be considered a "like product" to other tomato products, including canned and fresh tomatoes, and its importation can have direct impacts throughout the tomato sector. Domestic tomato paste production was reinitiated in 2004 when the Wenchi Tomato Factory (one of three such factories that had been closed and placed under divestiture) reopened. Many factories were closed as a result of structural reforms of the late 1980s.

Official data indicate that tomato paste imports to Ghana stagnated during most of the 1990s, but started to rise from 1998. Between 1998 and 2003, imports increased sevenfold from 3 300 tonnes in 1998 to 24 740 tonnes (Figure 7.4). The identification of import surges based on deviations from a three-year moving average showed that trigger volumes were breached in 2000 and 2002. Trigger volumes, as calculated under SSG methodology, were exceeded in 2000, 2001, 2002 and 2003. The market share of local tomatoes fell from 92 to 57 percent during the study period. Major exporters of tomato paste to Ghana from 1999 to 2003 were Italy (36 percent), China (16 percent), United States (8 percent), Spain (7 percent), Turkey (7 percent), Greece (6 percent) and Portugal and Chile (5 percent each). Exports from Italy have been supported by European Union export refunds of EUR 45/tonne

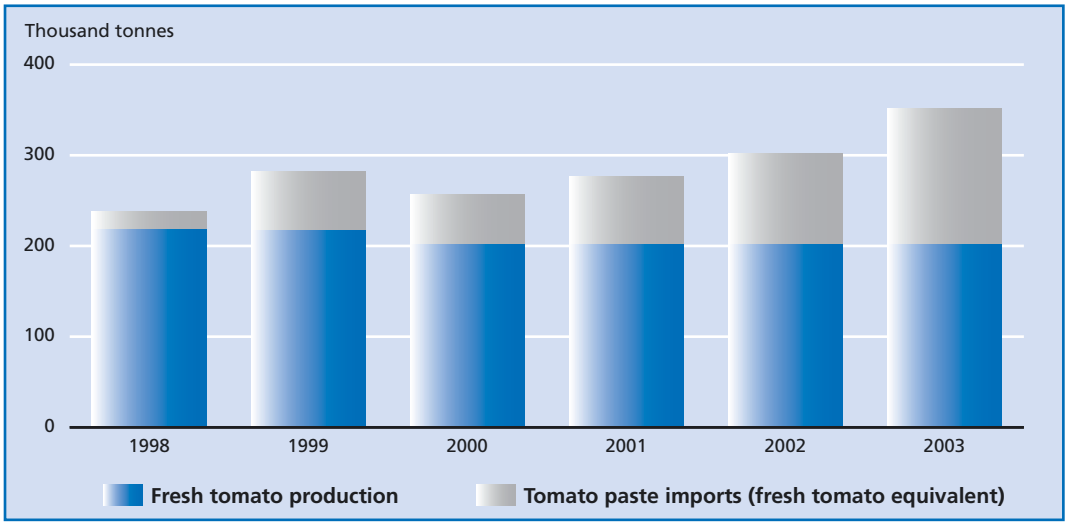
Figure 7.3
Ghana rice production, imports and consumption



Source: Statistics and Research Department (SRID) of MOFA, Ghana Ports and Harbour Authorities (GPHA)

in 2001 (about 10 percent of wholesale prices of tomato products during the period). Export refunds maintain low import prices which may maintain prices below production costs, thus inhibiting the ability of domestic producers to respond to market growth. Growth in local fresh tomato production fell from 215 000 to 200 000 tonnes during the review period. However production data in Ghana is poor as data published by MOFA appears to be estimates only since 2000.

FIGURE 7.4
Ghana tomato production and imports



Sources: Ghana's Ministry of Trade and Industry and Ministry of Food and Agriculture.

7.2.4 Honduras: rice

Import statistics from government sources clearly revealed two different import surges: the first one was relatively short lived and lasted one year in 1991. The second one was prolonged and lasted six years from 1995 until 2001. Stakeholders and policy-makers shared the view that the surge of 1991 was so harmful that the damage it caused to farmers could not be overcome in subsequent years.

7.2.5 Jamaica: dairy, onion, poultry

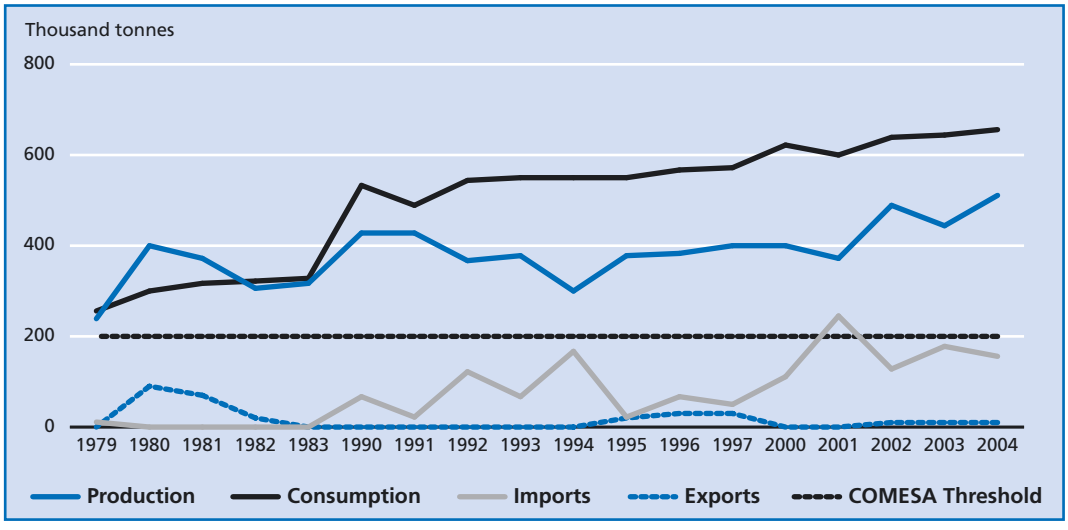
A common perception among stakeholders is that various commodities experienced import surges during the 1990s, notably onions, poultry and dairy products. However, proof of such surges was difficult to obtain through official statistics, because either these underestimate actual trade flows due to illegal imports, or because the commodities were incorrectly classified by importers to avoid higher duties. Nevertheless, official data confirmed that onion imports surged twice for periods that lasted between three and five years each. For poultry, they showed one surge in 1996 following several years of reduction after a period of relative stability. For dairy products the data indicated that imports increased gradually over a number of years. While this growth can be recognized over a long time series, peaks could be easily identified.

7.2.6 Kenya: dry milk powder, maize, sugar

Two categories of dry milk powders, namely dry whole milk powder and dry SMP, were examined. Dry milk powder in general accounted for 44 percent of Kenya's total volume and value of milk imports which include also milk cream, infant milk, butter and raw milk. Dry milk powder is a substitute product to raw liquid milk produced and marketed domestically. Data on imports of dry milk powder from 1990 to 2002 show that increases in import occurred in the mid-1990s and from 1998 to 2001. Between 1995 and 2002, imports exceeded the previous three-year moving average by at least 30 percent in 1995, 1998, 1999 and 2000.

Sugar imports in Kenya increased from about 65 000 tonnes in 1996 to about 170 000 tonnes in 1998 and to 250 000 tonnes in 2001. Significant import surges took place in 2001, 2003 and 2004, possibly coinciding also with the rise in unrecorded cross-border imports.

Figure 7.5
Kenya sugar production, consumption and trade



Source: Kenya Sugar Board (KSB) Yearbook, 2005.

For maize, a deficit in the domestic supply of maize had been recorded since the late 1990s. The deficit has been between 180 000 and 540 000 tonnes annually. The shortfall of maize supply in the country has been met through both recorded and unrecorded cross-border trade. Officially reported maize imports have been increasing from an annual low of 3 percent to an annual high of 12 percent of domestic consumption, reflecting the low levels of domestic production. Kenya experienced particularly serious surges in 1994, 1997, 2001 and 2004 when imports exceeded the previous three-year moving average by at least 30 percent.

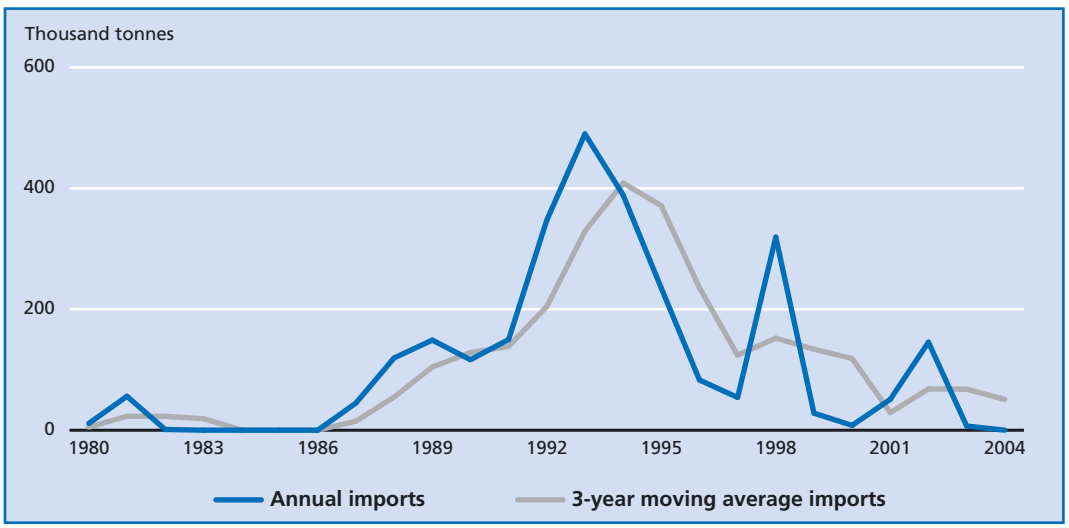
7.2.7 Malawi: dairy (fresh and dry whole milk), maize, sugar

There were 10, 8 and 5 surges in maize, sugar and milk respectively between 1980 and 2004. Official statistics on trends in fresh whole milk in Malawi showed that imports of fresh whole milk started at about 1 800 tonnes and were on five occasions at least 30 percent higher than the three-year moving averages. Since the 1990s imports have been less than the threshold except in 2002 where imports reached about 4 000 tonnes. For fresh whole milk, there were only three import surges in dry whole milk between 1980 and 2003. In 2001, South Africa accounted for 51 percent of dry whole milk imports, followed by Zimbabwe (11 percent), Malaysia (10 percent), New Zealand (8 percent) and Australia (7 percent). Recently, in 2003, most of the imports came from Australia (32 percent), South Africa (21 percent) and New Zealand (20 percent).

Figure 7.6 summarizes the maize import surge in Malawi. There was an increasing trend for maize imports between 1986 and 1993, and all imports except in 1990 rose above the previous three-year moving average. Between 1994 and 1997, there was a decreasing trend, with all imports falling below the threshold (the 30 percent positive deviation of imports from a three-year moving average). Imports above the threshold occurred in 1998, 2001 and 2002. But all in all, between 1980 and 2004, there were ten cases in which actual imports of maize were 30 percent above the three-year moving average.

For sugar, there have been eight import surges between 1980-2004, when actual imports were 30 percent higher than the three-year moving average. Seven of these surges occurred between 1990 and 2004. Most of the sugar imports originated from Zimbabwe facilitated by the bilateral trade

FIGURE. 7.6
Malawi maize imports

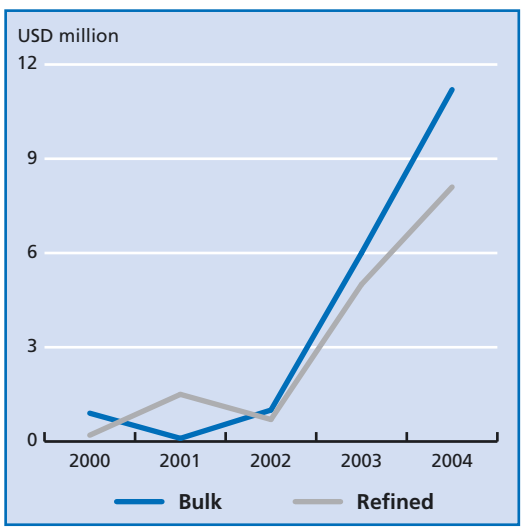


agreement of 1995. In 2002, Zimbabwe accounted for 71 percent of Malawi's sugar imports, followed by Italy (19 percent) and Kenya (9 percent).

7.2.8 Mozambique: poultry and vegetable oil

In Mozambique's poultry sector, official data indicated a sudden surge in imports of both frozen and refrigerated whole chicken into the country during the 2002-2005 period. Imports of refrigerated whole birds rose progressively between 2001 and 2004 and then declined; however, frozen whole chickens, 90 percent of total poultry imports, increased quite rapidly, peaking in 2005 with imports valued at more than USD 5 million. This is up from about USD 1 million worth of products imported in 2003. Brazil and South Africa were the major suppliers of imported poultry products. The chicken market in Mozambique has always been divided into two segments, one for live chickens (produced either by small or large operators) and the other for frozen chickens (mainly imported). Of the 38 million chickens consumed in Mozambique in 2004, 14 million, i.e. more than a third, were imported, while 17 million originated from backyard hens and 7 million produced by local commercial farms.

Figure 7.7
Mozambique vegetable oil imports



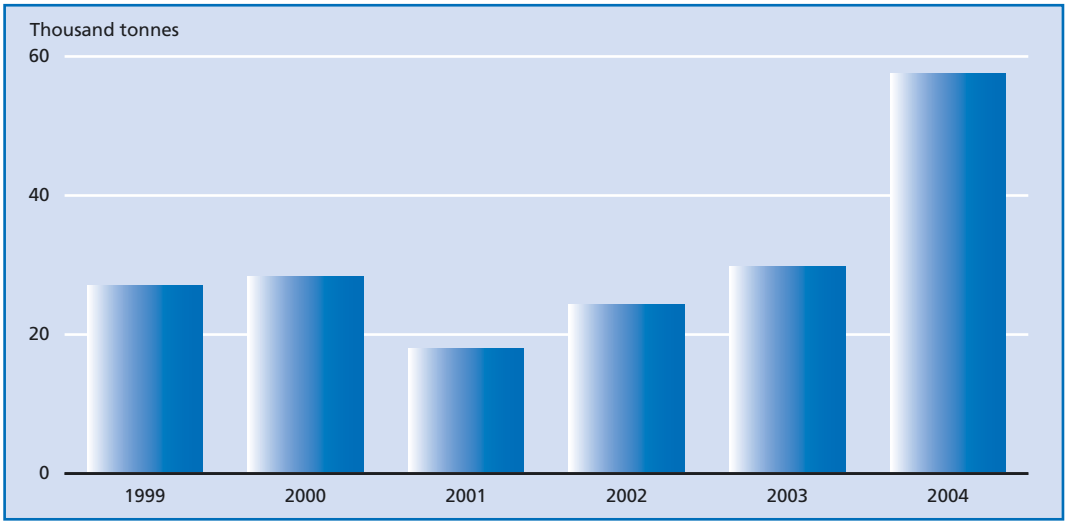
Data on vegetable oils remain patchy but there was evidence of a rapid and pronounced rise of bulk and refined vegetable oil import during 2002-04 (Figure 7.7). In 2004, vegetable oil imports represented about 81 percent of the domestic vegetable oil consumed in Mozambique. Of these, 45 percent consisted of industrially refined oil from crude oil imports and the rest was directly imported as refined oils. Palm, sunflower and soybean oils, both in crude and refined forms, are the main product types entering the country. Palm oil, in particular, accounts for about half of the total imports. Between 2002 and 2004 the total value of palm oil imports grew about five-fold in the country; this is perceived by stakeholders as clear evidence of a surge. Although no data on import volumes was compiled by Mozambican customs, proxies computed on the basis of international prices confirmed that palm oil purchases on international markets had a remarkable growth in the period of analysis. The pattern has been one of a steady growth in the United States Dollar value of imports while palm oil prices actually experienced a declining trend between 2002 and 2004. Detailed information on other vegetable oils was not available, but qualitative information from stakeholder interviews revealed significant growth of imports of refined sunflower oils as well. As such, the domestic market had essentially been supplied with imports. The small market share of local vegetable oil products consisted largely of less valued raw materials such as copra which is mostly produced, processed and marketed at the regional level. Major suppliers of bulk vegetable oils to Mozambique were Argentina, Indonesia, Malaysia and South Africa, which together accounted for an approximate 60 percent share of vegetable oil imports in 2004.

7.2.9 Philippines: onions, tobacco

The volume of onion imports fluctuated during the period, with sharp increases occurring in 1999, 2001 and 2003 over the previous year. Around 60 percent of the onion import was from China.

Onion imports relative to domestic consumption increased sharply in 1999 and 2001. While the average ratio was around 7 percent on average in the early 1990s, it rose to 12 percent in both years. Similarly, the ratio of imports relative to production

FIGURE 7.8
Philippines tobacco imports



Sources: Government of the Philippines.

also increased in 1999 and 2001 to more than 20 percent. Based on the trigger level methodologies defined under the AoA, volume breached the trigger level only in the year 2001, and price breached the trigger level in all the years for the period 1999- 2004.

In the case of tobacco, during 1999-2004, imports were fairly stable except in 2001 when imports were reduced and in 2004 when a large increase in import of about 57 300 tonnes took place (see Figure 7.8). The Philippines imported more than 30 percent of its total onion imports from Brazil and more than 20 percent from China.

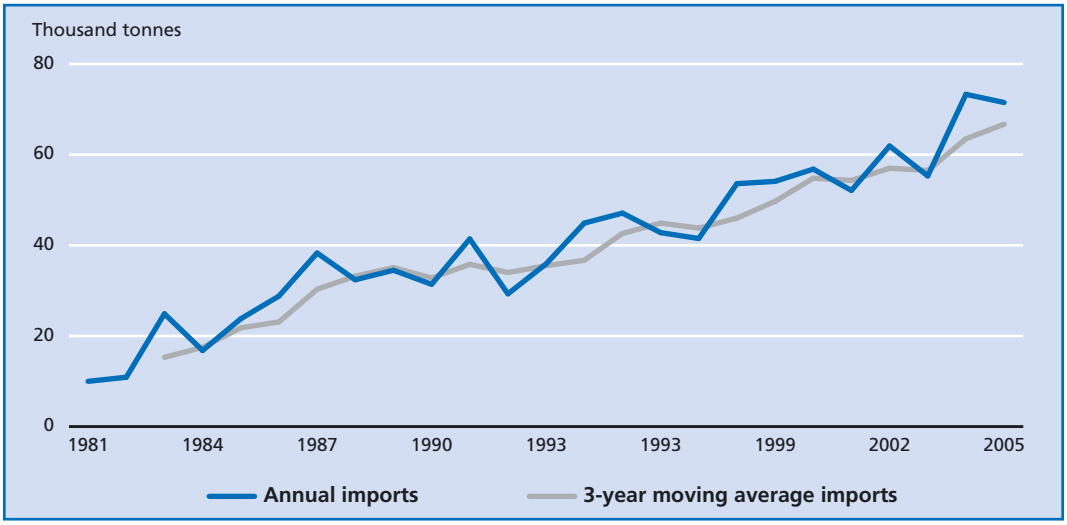
The year 2004 was also a critical year in terms of the ratio of imports to consumption which approached 65 percent compared with about 45 percent in the previous year. The ratio of imports to domestic production also increased significantly in 2004, with imports exceeding domestic production for the first time in recent history by nearly 20 percent. Based on trigger level computations, the volume trigger was breached in 1999 and 2004. However, there was no indication of import surge based on the trigger price computation. Interestingly when raw (non-manufactured) tobacco is disaggregated further according to the Harmonised System (HS) code, the price went below the trigger level for the subcategory of 'tobacco not stemmed/ stripped' in all the years from 1999 to 2002.

7.2.10 Sri Lanka: dairy

Official data summarized in Figure 7.9 show that annual imports of milk powder have more than doubled in 20 years from 30 000 tonnes in 1985-87 to 67 000 tonnes in 2003-05. This is equivalent to an average growth rate of 4.6 percent per annum over the entire period. The rate of growth in imports of milk powder accelerated after 1995 - from 4 percent per annum during 1985-94 to 4.9 percent per annum during 1995-2005. If imports had increased after 1995 by the same trend rate observed during the 1985-94 period, the volume of imports in 2003-05 would have been 40 000 tonnes, whereas actual imports amounted to 68 000 tonnes, or 70 percent more than the trend level. There is a tendency to associate this acceleration with the implementation of the Uruguay Round AoA although other factors might have been also at play.

Actual import levels and three-year moving averages of imports show that actual imports exceeded the three-years moving average import levels by 10 percent or more in 12 out of the 21 years

FIGURE 7.9
Sri Lanka milk powder imports

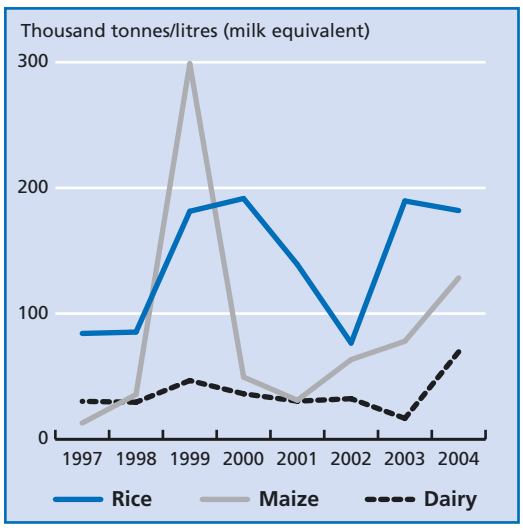


covered. In seven of these 12 cases (1985-87, 1991, 1994, 1995 and 2004), imports exceeded the three-years moving average levels by 25 percent or more. These could be taken as the surge episodes. For Sri Lanka, the ratio of imports to apparent consumption (domestic production plus net imports in terms of fresh milk equivalent) increased from about 20 percent in 1981 to about 50 percent in 1985 and remained in the 50 to 60 percent range until 2001 after which it increased to over 70 percent. Between 1985 and 2005, milk imports (primarily milk powder) increased sevenfold, while the supplies from local production expanded by less than 15 percent.

7.2.11 The United Republic of Tanzania: dairy, maize, rice

Figure 7.10 depicts import trends of dairy, maize and rice in the United Republic of Tanzania. Between 1997 and 2004, imports of dairy products had more than doubled from 3 459 tonnes to 7 111 tonnes; also rice import had doubled and reached 190 000 tonnes in 2004. Maize imports fluctuated between 13 000 and 298 000 tonnes but significant import surges were recorded in 1999 and in 2004. It is noted that in some cases, in order to identify an import surge and specify for which product it occurs, disaggregating the product groups such as maize, rice and in particular dairy, was needed. Otherwise, the aggregate data would mask the change in product composition. In the large sector like the dairy sector for example, there was a notable change in the product composition

FIGURE 7.10
The United Republic of Tanzania - dairy, maize and rice imports



Source: Government of the United Republic of Tanzania

of the United Republic of Tanzania's dairy imports. In 1997, dairy imports were dominated by milk and cream (92 percent of imported quantity), but the share of these products decreased to 59 percent in 2004 as imports of cheese (24 percent) and butter (10 percent) increased, and contributed to the surge of dairy imports in 2004. Analysis of surges at the aggregate level would have failed to identify surges in subproduct categories such as higher value cheeses if associated with concomitant, but slight, reductions in larger subproduct categories such as milk powder. Similarly, in the late 1990s, milled paddy rice dominated total rice imports. By 2004, broken rice had become the most important category.

7.3 Internal causes of import surges

7.3.1 Low productivity and lack of competitiveness in the domestic sector

Low productivity and lack of competitiveness marred the growth of the agriculture sectors in many developing countries in the case studies. The domestic sectors could not keep up with raising demand or deal with major shocks such as inclement weather conditions. Therefore, import surges were no surprise in the face of frequent shortages. In Honduras, for instance, rice production and in particular the available supply in the market, even under favourable climate conditions, could not match the quantity demanded. Moreover, elimination of input subsidies like the case of the dairy sector in Jamaica exposed the lack of competitiveness and vulnerability of the sector once the support was lifted, and prompted an import surge. In the United Republic of Tanzania's dairy sector, high energy costs contributed to reducing competitiveness of the processed commodities and was a potential source triggering the increases in import volumes.

In the United Republic of Tanzania, rapid growth in poultry imports also revealed the weaknesses of the domestic processing industry in competing with imported products, particularly in situations where there has been a rapid growth in demand for semi-processed and processed quality products by supermarkets and hotels, which the local industry has failed to supply. It was found that imported products were primarily sold in cities, where the import shares were much higher.

7.3.2 High production risks with lack of management tools

Inclement weather conditions (such as the hurricane Mitch in Honduras and drought spells in Kenya), and outbreak of animal diseases (e.g. Avian Influenza) exposed the vulnerability and weakness of the domestic sectors in many developing countries. But there was also a lot of uncertainty in input access (energy, water and other input prices) adding to the risks linked to the natural causes. The lack of management tools to respond to the disaster or mitigate the agricultural production risks prompted food import almost in all the developing countries in the case studies.

7.3.3 Trade policy reforms

The reforms following the Uruguay Round have led to erosion of trade barriers in many countries and have been confirmed as one of the most important sources of import surges in the case studies. Many import competing sectors such as onions and tobacco in the Philippines, poultry meat production in Mozambique, dairy in Sri Lanka and poultry, rice and vegetable oil in Cameroon faced import surges in part because of the rapid lowering of tariffs on these commodities. Likewise, Kenya appears to have experienced significant increases in sugar imports after the liberalization of its sugar trade and the removal of price controls in the country in the 1990s.

7.3.4 Trading arrangements

Various commitments in regional or bilateral trading arrangements include significant reduction in tariffs and export from low cost countries also led to import surges from their trading partners. This was the case for sugar import to Kenya and Malawi from Zimbabwe, and the United Republic of Tanzania respectively. Regional trading arrangements such as the COMESA, SADC and EAC have imports on various commodities such as sugar, dairy and vegetable oils in these countries.

7.3.5 Domestic market reforms and policies

For many staple foods, especially food grains, and for vegetable oils, some developing countries such

as Cameroon, Côte d'Ivoire and Honduras have considerably reduced the levels of consumption tax or value-added tax, which led to a higher demand and hence larger imports. Reduction of price control such as in the case of sugar in Kenya also led to increased imports. Moreover, deregulation and dismantlement of the marketing boards in many developing countries (rice in Honduras, and rice poultry and sugar in Côte d'Ivoire) led to higher domestic prices (uncontrolled), and invited cheaper import products.

7.3.6 Exchange rate movement

Many developing countries that adopted a flexible currency regime have experienced appreciation of their currencies as the economy stabilized over the years. Many countries in Sub-Saharan Africa experienced such currency appreciations which make import more attractive. The SAP also reduced fiscal and current account deficits and this increased the value of local currencies relative to trading partners.

7.3.7 Demand shocks

Sudden increases in demand for both raw and processed agricultural products due to, for instance, a jump in the growth of foreign investment or tourism industry, prompted an increase in import, and this has been mentioned for countries such as Kenya and the United Republic of Tanzania for poultry and milk powder.

7.3.8 Other internal causes

Civil strife

Many of the case study countries experienced political instability with some of them enduring long years of civil strife and wars (e.g. Côte d'Ivoire, Sri Lanka) that disrupted the domestic production. These events forced the migrations of people and livestock and disrupted input delivery and output markets. Productivity was further depressed and as a result imports increased.

Debt

For the rice sector in Honduras, for instance, the substantial fall in domestic production and the subsequent increasing substitution by imports under the new market environment of the years that followed was attributed in part to farmers' inability to repay the debts incurred in 1991.

Lack of infrastructure and weak institutions

The degradation of infrastructure and lack of institutional support have encouraged agricultural import surges in many developing countries. As an example, inability to control the long and porous border in countries such as Mozambique and Sri Lanka made the entry of illicit and undocumented imports permanent, especially during the period of political unrest. Indeed, investigation revealed that uncontrolled but long borderlines made undocumented trade or underinvoicing possible for many countries such as Kenya, Mozambique and the United Republic of Tanzania. The import surge was then more likely to arise especially when farmers across the borders wanted to get rid of their surpluses and sell at higher prices.

7.4 External causes of import surge

7.4.1 Mixed views for the effects of OECD production and export subsidies on import surges

Policies in third countries or in the countries' immediate trading partners are among the exogenous factors that led to reductions in prices in international markets and contribute to surges in imports. Production and export subsidies in OECD countries have been blamed for disruptive impacts on trade, with the burden of adjustment being transferred from producers in rich countries to those in poor countries, but these subsidies, especially export subsidies have been continuously declining, both in absolute terms and as a share of the value of trade. The Uruguay Round limited the use of export subsidies for the first time, but actual expenditures were well below the established limits. In 2002 expenditures for export subsidies amounted to about USD 3 092 million, 24 percent of the WTO ceiling. The European Union accounts for about 90 percent of the expenditures on export subsidies worldwide. Other countries providing subsidies include Switzerland (about 6 percent) and

the United States (about one percent). The exception is the dairy sector where subsidies have remained high and supported approximately one-third of OECD global shipments, lowering international prices.[4] Still, some stakeholders reiterated on many occasions (e.g. rice and tomato paste in Ghana; rice in Honduras; dairy in Jamaica and Sri Lanka) that subsidies from OECD countries have remained as one of the triggers for import surges into the developing countries. It is noted that in Jamaica's poultry production, for instance, stakeholders identified input subsidies from main suppliers like Brazil or the United States as one of the causes of the import surge. OECD policies affected import trend in developing countries, but how much they contributed to the import surges remained difficult to assess.

7.4.2 Food aid

The investigations revealed that in Honduras, Mozambique and Sri Lanka, food aid was at least correlated with the occurrence of import surges. Food aid accounted for a significant share of food imports of developing countries and food aid, or the provision of selected food commodities free-of-charge or under highly concessional terms, is provided in response to requests by governments and aims at alleviating problems of a humanitarian nature. Therefore, its causes and impacts are of a different nature from commercial imports. Nevertheless, food aid, by supplementing commercial imports, could reduce local producers' incentive and could be a source of import surges, especially after the food aid programme had been suddenly stopped.[5] The timing, targeting and distribution of food aid are important to avoid adverse impacts on competing domestic industries.

7.4.3 State trading

In some exporting countries where external trade is controlled by STE, either through direct trading or through licensing to ensure stability of domestic supplies of basic staple foods, sudden changes in the policies of such agencies have had very strong effects on world markets and on the markets of major trading partners. For example, in 2002 the Food Corporation of India adopted a new export/import policy that included lifting export restrictions and lowering minimum export prices for certain types of rice. This led to a rise in India's exports from about 2 million tonnes to around 5 million tonnes in 2002. Imports of rice from India rose sharply in a number of Asian countries including Sri Lanka, and also in some African countries. There was also a considerable decline in import unit values during this period.

7.4.4 Currency devaluation

Exports from a country experiencing devaluation become relatively less expensive thus encouraging larger imports to many destinations. For instance, Zimbabwe's currency depreciation (making import from Zimbabwe cheaper) in the 1990s led to the increase in sugar export to Malawi.

7.4.5 Some remarks on export credits

Export credits may contribute to surges in imports but the investigation on the selected developing countries revealed that export credit plays little or no role in causing agricultural import surges. As discussed in Chapter 3, Section 3.3 , the reason is that most export

[4] In terms of the importance of subsidies relative to the value of trade, they are greatest for butter (40 percent), and somewhat lower for SMP and cheese and other milk products (between 6 and 11 percent). The largest provider of dairy export subsidies has been the European Union. In periods of excess dairy product supplies, or weak demand, export subsidies exacerbate price depression and may channel trade to markets which have relatively open access conditions. As export subsidies/tonne increase substantially when markets turn down, they can potentially lead to import surges. Over the 2000-04 period average European Union export subsidies for dairy products ranged, as a share of world prices, from 132 percent for butter to 28 percent for SMP. Whether subsidy-induced import surges result in injury requires analysis of impacts on producers and consumers at the individual country level. Subsidies depress commodity prices and can lead to higher levels of imports, though they are not very likely, in general, to contribute to surges due to their low level in relation to total trade values and to the infrequent changes in their rates.

[5] There is also a clear tendency for food aid to be more abundant in periods of low world market prices, in contrast to the situation during periods of high prices when food aid receiving countries are relatively more in need.

credits are granted to OECD destinations and not to developing countries. During 1995-98, 60 percent went to OECD countries compared with 9 percent for Net Food Importing Developing Countries and 0.2 percent for LDC.

7.5 Interactions and combination of causes

As in nearly all cases the investigation of the sources of import surge in developing countries relied much on interviews with all stakeholders and the results showed that import surge appeared to be generated not by a single source but by a combination of many sources. One important example is the combination of the liberalization of the domestic market and the reduction in tariff as these policies were part of the economic reform package in developing countries in the 1990s. It is therefore not a surprise that these policies jointly contributed to the rise in import, at least for some time between the early 1990s and 2004, in many developing countries including those selected for the case studies. Similarly, import surges triggered by a domestic supply shortfall due to, for example, harsh weather conditions, were common in countries with porous borders. Another example is that of import surges triggered by the growth in demand, exacerbated by the weakness of the domestic production. The latter is the case for Senegal's and the United Republic of Tanzania's poultry sectors where the domestic processing industry was too weak to respond to the rapid growth in demand for processed products by supermarkets and hotels. The combination of factors complicated the estimation of the share of responsibility for each cause of import surge, especially because data for statistical analysis were not available.

7.6 Conclusion

The investigation of the causes leading to import surges in developing countries indicated that contrary to the prejudices, market reforms and trade liberalization did not stand alone as the main trigger of import surges. Other sources within the sectors or the countries and those from abroad may have individually or collectively triggered import surges. For many developing countries, their porous borders and uncompetitive domestic sectors made the surge more likely to occur. The plurality of sources of import surge implies the interactions of causes triggering the surge, but it may also imply some correlations among some of these sources. Identifying the share of the share of responsibility of each source requires additional and more accurate information, but the method to be used can be similar to the one used in the non-attribution analysis (discussed in Chapter 5) that differentiates among the sources of the observed consequences (injuries) of several shocks (including import surge) on the market.

APPENDIX 7.1
IMPORT SURGE CASES REPORTED IN FAO COUNTRY CASE STUDIES

(FAO, 2000 AND FAO, 2003B)

Jamaica – poultry cuts: the import of poultry meat has often surged in the past decade, often to the detriment of the poultry sector. There have been several calls from the industry for AD or similar actions. In response, import reference prices were established for customs valuation purposes - in 1993/94, and the duties on leg quarters were levied on the basis of the average c.i.f. price of USD 0.52 per pound.

Jamaica – sugar: as with poultry cuts, Jamaica also faced difficulties in regulating the import of sugar. In response, the Government set reference import prices on the basis of five-year moving averages of world market prices, at about USD 0.20 per pound initially in 1995 and slightly more in later years.

Jamaica – beef: there have been incidents with beef imports, when in 1998 the Jamaican beef farmers' association complained that local production was being hurt by imports of ground beef used for McDonald burgers, despite the 40 percent tariff. Farmers complained that the export of the beef was subsidized and called for higher duties.

Sri Lanka – onions: some vegetable producing subsectors, notably onions and potatoes, have been found to be highly vulnerable to import surges. In 1999, an import surge of onions and potatoes resulted in a decline in cultivated area of these crops, affecting the livelihood of approximately 300 000 persons involved in their production and marketing. The immediate possibilities for affected farmers to turn to other crops are limited. Consequently, the economic effects of import liberalization in this sector have been significantly negative.

Côte d'Ivoire – palm oil: prior to the Uruguay Round, import surges were responded to with specific duties, notably on certain meats and dairy products to countervail the negative impacts of export subsidies and reference prices. With WAEMU and CETs, two temporary tariffs were designed to protect products from losses generated by the adoption of CET and by the vagaries of world prices. These tariffs were the *Taxe dégressive de protection* (TDP) and the *Taxe conjoncturelle à l'importation* (TCI); the TDP concerns mainly industrial and agriculture-based industrial products, whereas the TCI deals with agricultural products, in addition to the agriculture-based industrial products. The TCI is implemented when the c.i.f. price of the eligible product is lower than, or equal to, the trigger price level. It is designed to dampen the impact of the erratic movements of world prices of certain products and fight against dumping practices.

In May 2001, the import price of raw palm oil products fell from USD 671/tonne in 1998 to USD 310/tonne in 2000 and to USD 250/tonne in the first trimester of 2001. It was estimated that Côte d'Ivoire producers' loss of competitive edge versus Malaysian imports was around 22-29 percent owing to a 50 percent reduction of export taxes by Malaysia in order to reduce its large stocks. The TCI was triggered. It was estimated that this would reduce farmers' loss of farm gate price by 75 percent, keeping it at XOF 18.5/kg instead of XOF 15/kg. The case study also showed that while there were several "surge-like" imports, the data on net imports do not show these as there was a considerable amount of re-exports.

Illustrative cases of import surges and effects collated in 2003 FAO paper prepared for Committee on Commodity Problems (FAO, 2003a)

Senegal – tomato paste: imports of tomato paste by Senegal increased fifteen-fold, from an annual

average of 400 tonnes during 1990-94 to roughly 6 000 tonnes in 1995-2000. Between the same periods, average annual production fell 50 percent from 43 000 to about 20 000 tonnes. The post-1994 liberalization of tomato paste imports, coupled with European Union export subsidies, is blamed for the dramatic rise in imports and the negative impact on production. A similar phenomenon has been observed elsewhere in the region.

Burkina Faso – tomato paste: the import of tomato paste increased fourfold between 1990-94 and 1995-2000, from 400 tonnes to 1 400 tonnes, while tomato production fell by 50 percent from about 22 000 to 10 000 tonnes.

Jamaica - vegetable oils: Jamaica has experienced pronounced import surges of vegetable oils since 1994. Average annual imports during 1995-2000, at 29 000 tonnes, more than double the volume in 1990-94. Between the two periods, production fell by 68 percent to 5 000 tonnes.

Chile - vegetable oils: as in Jamaica, average imports of vegetable oils rose from 58 000 tonnes in 1985-89 to 173 000 tonnes in 1995-2000. Over the same period, average domestic production declined from 54 500 tonnes in 1985-1989 to 25 200 tonnes.

Haiti – rice: imports of rice increased from an average annual level of about 17 000 tonnes (milled equivalent) in 1984-89 to 226 000 tonnes in 1995-2000, a thirteenfold increase. The decline in production in the corresponding periods, however, was modest, from about 84 000 to 78 000 tonnes. Although it is difficult to estimate the extent to which production would have increased if not for the massive imports, analysts believe that imports played a major role in negatively impacting rice production.

Haiti - chicken meat: Average import in 1985-89 was 500 tonnes, but increased more than thirtyfold by 1995-2000. In contrast, domestic production stagnated and actually declined, from 7 200 to 6 500 tonnes.

Kenya - dairy products: the Kenyan case presents a good example of the link between the surge in the import of dairy products and domestic production of milk. During 1980-90, the volume of milk processed rose steadily from 179 000 to 392 000 tonnes, i.e. by more than 100 percent (Kenya Dairy Board). From 1990 onwards, the volume processed fell dramatically, to as low as 126 000 tonnes of milk in 1998. At the same time, the imports of milk powder rose from 48 to 2 500 tonnes (in fresh milk equivalent, 408 000 litres to 21 million litres). The influx of the imported milk powder, as well as other dairy products, depressed the demand by milk processors for fresh local milk. Small milk producers in particular bore the brunt of the impact. Also, Kenya's ability to diversify into processing activities was undermined.

Benin - chicken meat: in Benin, chicken meat imports had increased seventeenfold by 1995-2000 from the 1985-89 annual average of about 1 000 tonnes. During this period, growth in domestic production remained stunted and rose only modestly from 25 000 to 27 000 tonnes.

APPENDIX 7.2 POTENTIAL CAUSES OF POULTRY MEAT IMPORT SURGES

Poultry import surges can, similar to those for other commodities, be generated by either domestic or external actors. Examples of domestic factors include production shortfalls, tariff reductions, or exchange rate movements. Others, however, can be a result of temporary exogenous shocks, either market or third country policy-induced changes which result in a sudden downward shift in international poultry prices. Examples of third country policies include those linked to sudden changes in export subsidies, export credits or the use of poultry as food aid by exporting countries. Non-policy and market specific import surge-related shocks can result from sudden currency devaluations in large poultry exporting or importing countries or supply or demand shocks which result in sudden changes in international prices. In general, poultry meat import surges should be able to be explained by either external factors in the context of policy or market shocks or domestic factors which change the competitive position of the local industry.

Domestic factors

Trade reform, as a pervasive influence changing the conditions of access to markets obviously has far reaching effects on competition between imported and domestically produced products as tariffs are reduced. For example, in Senegal, **tariff reductions on chicken**, in the context of a regional trade agreement, led to higher imports over the 2000-03 period. The growth in imports was rapid since tariff reductions were implemented in a context of **appreciating exchange rates**, thus accentuating the price wedge between imported and domestic product, and poultry imports rose fourfold to account for nearly one-quarter of domestic consumption. A general opening of economies under **regional trade agreements** combined with **structural adjustment requirements** of the donor organizations, limit countries from increasing applied tariffs, even if significantly below bound rates reported to the WTO. In the case of Ghana, as in Senegal, a lowering of tariffs led to a fourfold import rise over the 2000-05 period. The Ghana Poultry Farmers' Association led a successful campaign to increase tariffs on poultry imports from 20 percent to 40 percent in February 2003. However, the new tariff rate could not be implemented due to conflict with other protocols and government obligations, particularly within the ECOWAS subregion.

In the case of the United Republic of Tanzania, the growth of supermarkets, driven by changing consumer preferences and supported by **foreign direct investments (FDIs)**, has fuelled a rapid growth in poultry imports, albeit from a small base. The United Republic of Tanzania has been the leading destination for FDIs in Sub-Saharan Africa during the last decade and larger poultry imports were the result of considerable multinational investments in hotels, supermarkets and food services. These increases occurred in a context of **changing consumer requirements** for processed poultry products and **inadequacies in the domestic processing industry**, as products destined for tourists and upper segments of the market (an important target market of the food service industry) have been increasingly supplied by the imported product. In other cases, **domestic market reform** which results in **sudden change in production costs** affecting the short-term competitiveness of the local industry can lead to sudden surges in imports. An example of the latter is the case of Ghana where feed costs reportedly doubled over the 2000-05 period, lessening the competitiveness of local broiler industries. **Irregular importing practices**, such as that of underinvoicing consignments to avoid paying full duties, can also contribute to import surges, particularly when tariffs are very high and price differentials between domestic and local products provide incentives for these types

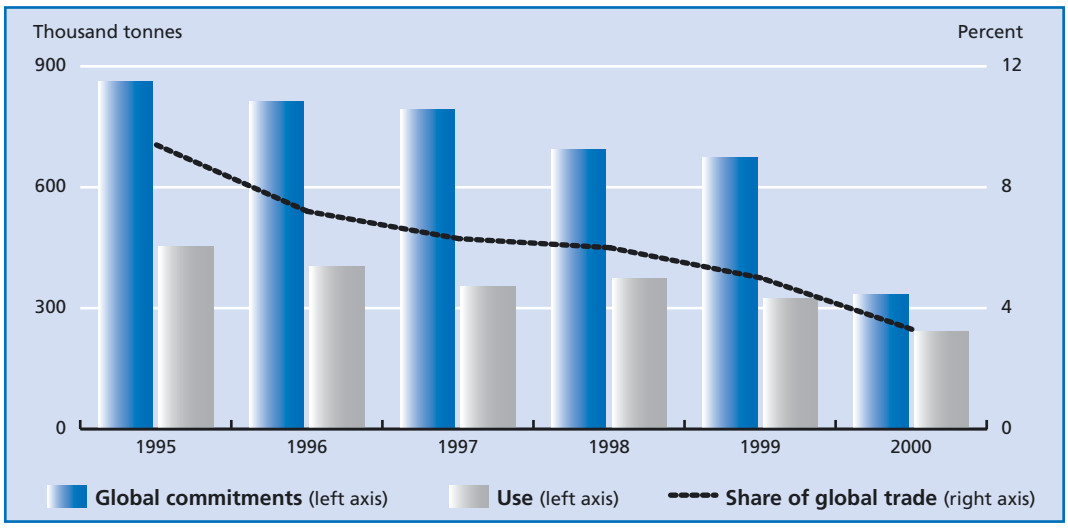
of practices. Strong import growth can also be induced by **civil strife** in neighbouring countries, with increased imports in one country being transhipped, formally or informally, into the neighbouring country as a result of declining production or reduced import capacity induced by port closures.

External factors

Third country policy developments which influence prices could include large changes in export subsidies, food aid or export credits. The last two, however, are infrequently available for poultry products. Some of the policy/market driven factors which could potentially damage local suppliers in developing countries would more likely stem from international market developments which induce sharp declines in world commodity prices. The commonly cited factors influencing poultry markets are developments in major poultry exporting/importing countries which could dramatically change supply availabilities. These include large production increases; financial crises in major importing countries which cause sharp reductions in imports and prices and trade diversion; and animal disease outbreaks which can dramatically influence short-term consumption and price patterns.

The African press had given considerable coverage to the damaging impact of **subsidized poultry** in their markets but the actual poultry export subsidy worldwide has declined over the years (see following figure). Of the approximately 15 countries which include export subsidy commitments for poultry in their WTO schedules, the European Union, the world's third largest poultry producing area, accounted for 70 percent of the global West Africa Share of consumption. Production accounts for only 3 percent of global poultry trade. But over ten years, imports have increased fivefold with imports as a share of consumption rising to nearly 30 percent of the subsidy commitment ceiling in 1995. With most of the other countries exporting less than their ceiling, actual export subsidy utilization by the European Union accounted for between 90-100 percent of global use. In the United States, the Export Enhancement Programme was used explicitly for subsidizing whole bird exports to Middle Eastern markets; however, it has not been operational since 1999. Currently, about 1 percent of the value of international trade in poultry meat is subject to export subsidies. While a large percentage of European Union poultry products are shipped to Africa, the European Commission precludes the use of export restitutions for all African

FIGURE A7.2-1
Poultry export subsidies



countries, with the exception of Angola. Moreover, the list of products eligible for refunds is limited to whole poultry and chicks, with refunds for poultry cuts only available for exceptional reasons (for example, the recent outbreak of AI in Europe). All traders are required to provide a proof of destination in order to benefit from export refunds. In general, any use of export subsidies which are stable over a period of time should not normally result in price and trade volatility. Normally the level of export restitutions tends to vary with world market prices; thus, the increase or decrease of a specific subsidy level should, on the margin, result in a changing market share by the subsidizing country.

A market shock in a large importing market resulting in significant declines in internationally traded poultry products can cause country specific import surges in third countries, with potential damaging impacts on emerging industries. The 1998 financial crisis in the Russian Federation is an example of this type of market shock. The August 1998 devaluation of the Russian rouble resulted in a dramatic decline in meat imports, particularly of chicken leg quarters. The collapse of the Russian Federation's position as the world's largest poultry meat importer, accounting for one-quarter of global imports, led to significant international market price impacts, particularly for leg. These include countries from Eastern Europe, in particular, the Czech Republic, Hungary and Romania, a region which accounted for nearly 30 percent of total allowable subsidies in 1995, followed by Central and South America. Brazil is the key recipient of a subsidy ceiling of 96 000 tonnes which was never used due to financial constraints. Meanwhile, the ceiling for subsidized poultry meat from the United States accounted for nearly two-thirds of its total meat subsidy allocations and 4 percent of the global allocation. The United States has not subsidized poultry exports since 2001. The European Union ships approximately 1 million tonnes of fresh/chilled/frozen poultry products, valued at over USD 1 billion, to more than 150 markets around the world with three-quarters of these shipments destined for the Russian Federation (23 percent), Middle Eastern markets (27 percent) and developing countries in Africa (26 percent). Export refunds are granted only to products destined for Angola, Bahrain, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, the Russian Federation, Saudi Arabia, the United Arab Emirates and Yemen. The immediate impact of the Russian devaluation was a precipitous decline in leg quarter prices in the United States, in the last quarter of 1998. United States prices fell by more than one half with the f.o.b. export value of United States chicken to the Russian Federation dropping by 32 percent to USD 487/tonne in 1999. In Ghana and Haiti, consequently, imports in 1999 more than doubled as c.i.f. prices dropped by 10-20 percent while local dependence on imported products rose to nearly three-quarters of domestic consumption. In both Ghana and Haiti, imports continued to rise after 1999, leading to the issue of whether one-time shocks in imports can inflict long-term damage on local industries. Other external factors which could contribute to import surges include **triangular trade flows through free trade zones in third countries**. In the case of Mozambique, it is claimed that triangular trade patterns (Brazil/Unite Arab Emirates(Dubai)/Mozambique) led to sudden surges of chicken imports as stores in Dubai were filled with shelflife sensitive products which needed to be moved quickly. Similarly, in the United Republic of Tanzania. increased poultry imports were sourced from The United Arab Emirates' Dubai, which as a free trade port is becoming an important transit point for poultry. While Africa is not one of the targeted zones for the European Union subsidized poultry, the United Arab Emirates is a recipient of European Union subsidized products which could be repackaged and transhipped to other markets. **Animal disease**, in particular zoonotic diseases such as AI, can result in dramatic changes in consumption and trading patterns and in prices. In late 2005 and 2006, a sharply lower poultry consumption in major import markets led to stock build-ups and prices which dropped by nearly 50 percent in a six month period. While some developing countries have also experienced similar consumption shocks due to disease outbreaks or to escalating concern about human health, these lower international prices could induce speculative activity by traders and short-term import surges in developing countries.

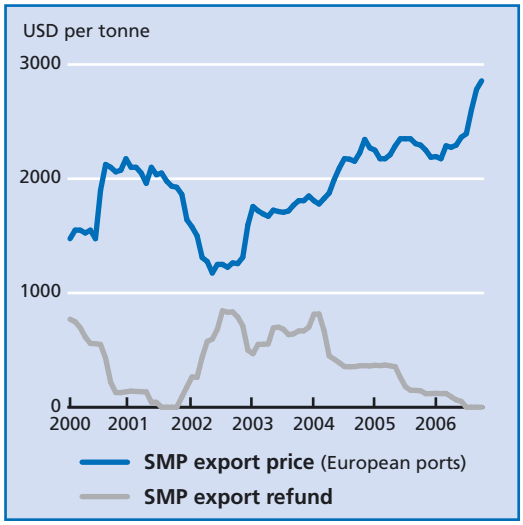
APPENDIX 7.3
POTENTIAL CAUSES OF DAIRY IMPORT SURGES IN DEVELOPING COUNTRIES

External market factors

Domestic income and price supports contributed to increased production levels and the build-up of surpluses that spilled over into world markets; this was particularly true of the European Common Agricultural Policy (CAP) before 1990 when the European region's exports comprised over half of world trade. It has also been the case under various Farm Bills of the United States with stocks of the Commodity Credit Corporation being disposed of on world markets. Sudden changes in such policies are infrequent, and thus they are unlikely to result in short-term import surges. However, by lowering the level of world market prices, they affect longer run conditions of competition for industries in other countries. Agricultural policy reforms since 1992 in the European Union have helped to reduce excess supplies. Recent increases in international prices reflect this evolving market situation and in particular the CAP reforms of 2003.

Export subsidies are one of the policy instruments most often blamed for import surges and disruptive impacts on dairy product trade. In recent periods of excess dairy product supplies, or weak demand, export subsidies have exacerbated price depression as export subsidies/tonne increase substantially when markets turn down (see following figure); consequently, it is at such times that the potential for import surges is the highest. The largest provider of dairy export subsidies has been the European Union, which supplied about 25, 35, 20 and 30 percent of trade in butter, cheese, SMP and whole milk powder, respectively in the 2000-2004 period. European Union subsidies for these products averaged between 121 percent of world prices for butter to 25 percent for SMP. However, policy reforms and higher world prices have led to reductions in 2005 and particularly in 2006 (see the following figure and table) Historically, the United States also provided export subsidies under its Dairy Export Incentive Program (DEIP), but this has not been used since 2004.

FIGURE A7.3-1
SMP Export Price (European Ports) and SMP Export Refund (2000-2006)



Sources: European Commission (2007).

The 1998 currency devaluation in the Russian Federation, which was then the largest dairy product importer, caused its imports of butter and cheese to be reduced by half. This reduction, along with larger export supplies from Australia and New Zealand, and the Asian financial crisis of 1997-98, contributed to a drop in international dairy market prices of over 30 percent. Another significant price decline, of nearly 40 percent in 2002, was caused by increasing global supplies that coincided with a world economic slowdown.

TABLE A7.3-1
European Union Export Refunds for SMP and whole milk powder (WMP), annual averages

	SMP Refunds	WMP Refunds
	USD/tonne	*USD/tonne*
2000	459	791
2001	78	539
2002	611	979
2003	626	1 095
2004	482	1 007
2005	233	722
2006 *	35	597

* SMP refund set to zero since mid-June 2006

Note: Yearly averages of export refund rates determined by the European Commission, in consultation with the Milk Management Committee which is composed of the Union's Member States. Conversion of original rates expressed in Euro to United States Dollar at exchange rate on 15th of prevailing month.

Domestic factors

Low national tariffs mean that domestic dairy sectors must compete at usually low distorted international prices. Some countries which undertook structural reforms following the International Monetary Fund (IMF) directives in the 1980s and early 1990s exposed their domestic sectors to artificially low international prices, while others implemented low tariffs in order to favour the import of low cost supplies to benefit domestic consumers. As a result, in countries with constraints to domestic production and marketing, industries have failed to develop; and demand growth has been mostly met by increased imports. As illustrated by the country case studies, this is a common problem. The examples of Jamaica, Malawi and Sri Lanka fit this situation with underdeveloped dairy industries, insufficient investments to adapt to newer technologies and large and increasing imports that often represent a rising share of the domestic market.

Multilateral trade liberalization is usually gradual and therefore does not result in abrupt and large surges of imports. Country case studies reveal that in many instances, WTO-imposed tariff reductions have involved very gradual tariff declines negotiated on the basis of bound tariff levels, which were unlikely to have contributed to import surges; moreover, applied tariff rates have typically been well below bound rates. In some cases, applied tariff levels have been decreased unilaterally or according to regional trade arrangements, such as in the case of some African countries.

Facilitating the onset and persistence of import surges of dairy products are the **relatively high cost structures of local production** beset by various structural, organizational (including processing and storage constraints) and resource constraints. These unfavourable conditions can potentially translate the incidence of a one time shock in imports into longer-term injury inducing stagnation or reduction of production of dairy products while supporting the expansion of imports of competing products.

Inadequate marketing and transportation infrastructure continues to constrain dairy development. In much of the developing world, dairy production remains largely confined to informal traditional markets, and linkages to international markets remain weak. Above all, linkages to domestic urban markets, where demand is rising quickly, are also often limited leading to increasing reliance on imported supplies.

Variation in national exchange rates can have a direct impact on the prices of imported goods. Mirroring the effects of devaluations in third countries, appreciating national exchange rates make imports more attractive and affordable to domestic consumers. The appreciation of the Franc CFA (the currency for the Commnuauté Fiancière Africaine) *vis-à-vis* the United States Dollar influenced trading patterns for dairy products in some case study countries.

Growth of **foreign direct investment**, for example in supermarkets, tourist hotels or airlines, has led to changing patterns of food procurement and increased

imports of selected dairy products or frozen poultry meat. However, in volume terms these trade flows are relatively small.

References

de Nigris, M. 2005. *Statistical analysis of import surges and production trends*, FAO Import Surge Working Paper No. 2, FAO, Rome, May 2005.

FAO. 2003. Paper on Commodity Committee Problems.

FAO. 2006. Import Surges: What are they and how can they be identified? FAO Briefs on Import Surge Issue no.1 October.

FAO. 2006. Import Surges: What is their frequency and which are the countries and the commodities most affected? FAO Briefs on Import Surge, Issue no.2 October.

FAO. 2006. Import Surges: What are their external causes? FAO Briefs on Import Surge, Issue no.3 November.

FAO. 2006. Import Surges: What are the contributing domestic factors? FAO Briefs on Import Surge, Issue no.4. October.

FAO. 2006. Import Surges: Institutional requirements for the implementation of a Special Safeguard Mechanism. FAO Briefs on Import Surge, Issue no.5. (November).

FAO. 2006. Import Surges: Injury: issues and identification. FAO Briefs on Import Surge, Issue no.6 (November).

FAO. 2006. United Republic of Tanzania: rice, maize and dairy. FAO Briefs on Import Surge: Country case study no.1 November.

FAO. 2006. Malawi: Maize, sugar and dairy products. FAO Briefs on Import Surge: Country case study no.2.

FAO. 2006. Mozambique: Vegetable oils. FAO Briefs on Import Surges: Country case study no. 3.

FAO. 2006. Cameroon: Poultry, rice and vegetable oils. FAO Briefs on Import Surges: Country case study no. 4.

FAO. 2006. Ghana: Rice, poultry and tomato paste. FAO Briefs on Import Surges: Country case study no. 5.

FAO. 2006. Jamaica: Poultry, dairy products and onions. FAO Briefs on Import Surges: Country case study no. 6 (November).

FAO. 2007. Kenya: Dry milk powders, sugar and maize. FAO Briefs on Import Surges: Country case study no. 7 (February).

FAO. 2007. Sri Lanka: Dairy products. FAO Briefs on Import Surges: Country case study no. 8. (February).

FAO. 2007. Philippines: Onions and tobacco. FAO Briefs on Import Surges: Country case study no. 9 (February).

FAO. 2007. Mozambique: Poultry meat. FAO Briefs on Import Surges: Country case study no. 10 (February).

FAO. 2007. Honduras: The extent and impact of Import surges in Honduras: The case of Rice. FAO Briefs on Import Surges: Country case study no. 11 (February).

FAO. 2007. Côte d'Ivoire: Insights on rice, poultry and sugar imports into Côte d'Ivoire. FAO Briefs on Import Surges: Country Case Study no. 12 (February).

FAOSTAT

Government of Cameroon.

Government of Côte d'Ivoire. Direction des statistiques douanières.

Government of Ghana. Ministry of Agricultures and Fisheries.

Government of Ghana. Ministry of Trade and Industry.

Government of Honduras. Ministry of Agriculture.

Government of Jamaica. Ministry of Agriculture.

Government of Kenya, Kenya Revenue Authority, Records

Government of Malawi. Ministry of Agriculture.

Government of Mozambique. Ministry of Finance. Mozambique Customs.

Government of Philippines. Ministry of Finance.

Government of Sri Lanka. 2007. Customs Department Publications.

Government of the United Republic of Tanzania.

Grethe H. & Nolte, S. 2005. Agricultural import surges in developing countries: Exogenous factors in their emergence. FAO Import Surge Working Paper No. 5, FAO, Rome, May 2005.

Kenya Dairy Board (KDB).

Kenya Sugar Board. 2005. Sugar Yearbook.

CONSEQUENCES AND IMPLICATIONS OF IMPORT SURGES IN DEVELOPING COUNTRIES

8

8.1 Injuries and consequences

Investigating the consequences of import surge in developing countries is important for estimating its actual impacts on stakeholders and determining the appropriate measures to limit or magnify the impacts. The term 'injury' originally relates to producers' loss and its use may be misleading and too narrow in the examination of the consequence of import surges for at least two reasons. First, not all types of producers lose from an import surge and even for those who lose, the extent of the loss varies greatly. Small-scale farmers are often worse off while large-scale producers for example may not lose much because the latter have more ability to endure and cope with the risks associated with the surge. Some large-scale producers may even benefit from the competition with foreign agriculture products that embed technology and knowledge in them. Second, the impacts of import surge on agents other than producers within the sector or other agents outside the sector may be different (e.g. losses for local butchers versus meat packers; butchers versus transporters). It is therefore more insightful to use the term 'consequence' and to specify who loses and who gains in examining the impacts of the import surge over a broad spectrum of stakeholders.

This chapter highlights the main consequences of import surge in the case study countries and focuses specifically on its effects on price competition, volume and market shares of the domestic sector and the level of profits. Investigations on the positive consequences of the import surges in developing countries are also reported in this chapter. Table 8.1 summarizes some of these consequences and confirms that although there are many cases of injuries, not all groups of stakeholders lose from import surges.[1] These findings will be discussed in detail in subsequent sections. This chapter also addresses the difficulties encountered in measuring the consequence of import surges, especially on how to isolate the impact on producers or consumers, and on what benchmark to use for measuring the change in the stakeholders' welfare or profit.

Similarly, Box 8.1 reports the multicountry studies on specific commodities and describes the consequences of import surges on the affected sectors.

8.2 Price competition

The case studies show that import surge often stirred the competition between imported and domestic products and led to the fall in domestic price, especially when the two products are substitutes. This applied specifically for the cases of rice and poultry in Côte d'Ivoire, dry milk in Kenya, poultry meat and vegetable oil in Mozambique, onions in the Philippines and rice in the United Republic of Tanzania. The extent of the fall in domestic price however varied greatly among sectors.

There were, however, cases where import surge had no effect on the domestic prices. The poultry, rice, vegetable oil sectors in Cameroon, and tobacco in the Philippines, are examples for which the import surge had little or no effect on the domestic prices of these

[1] Besides the FAO briefs, sources include Sharma et al. (2005)

TABLE 8.1
Consequences of agriculture import surges in developing countries

Country	Commodities	Negative Price effect	Level of domestic production falling	Declining market share of the domestic production (volume share)	Declining market share of the marketed domestic production over total (%sale)	Declining profit in the domestic sub-sector	Who benefits (beside consumers)	Who loses the most ?
Cameroon (1999-2004)	Poultry	no	yes	yes	yes	yes		farmers, local industries
	Rice	no	yes	yes	yes	yes		farmers, local industries
	Vegetable oils	no	yes	yes	yes	yes		farmers, local industries
Côte d'Ivoire (1996-2004)	Poultry	yes	yes	yes	yes			farmers, , local broilers
	Rice	yes	yes	yes	yes			farmers
	Sugar	no	no (it is rather the drop in domestic production that increases the Import)					
Ghana (1998-2004)	Rice	no		yes	yes			
	Poultry	no		yes	yes			
	Tomato paste	no		yes	yes			
Honduras (1991-2005)	Rice		yes	yes				local farmers, millers
Jamaica (1980-2005)	Dairy		yes	yes		yes (collapse)		
	Poultry		no	no	no	no, profits rose	domestic producers	
	Onions		yes	yes		yes (collapse)		domestic producers

Kenya (1973-2003)	Dry Milk Powder	yes		yes	yes	yes		small producers, processors
	Maize							
	Sugar							local sugar farmers
Malawi (1980-2004)	Dairy	No harm in general						
	Maize	no (price rose instead)						
	Sugar	yes						domestic producers (industry)
Mozambique (2001-2004)	Poultry meat	yes					importers	local broilers and producers
Mozambique (2002-2004)	Vegetable Oils	yes	yes	yes				domestic producers (industry)
Philippines (1999-2004)	Onions	yes						small farmers
	Tobacco	no		yes	yes			small farmers
Sri-Lanka (1985-2005)	Dairy products	yes	yes	yes				
Tanzania (1997-2004)	Dairy						large processors and importers	small processors, producers
	Maize						medium scale millers, retailers	
	Rice	yes					medium scale millers, retailers	

Box 8.1
Import surge cases and their main consequences

Sri Lanka – onions: some vegetable producing subsectors, notably onions and potatoes, have been found to be highly vulnerable to import surges. In 1999, an import surge of onions and potatoes resulted in a decline in cultivated area of these crops, affecting the livelihood of approximately 300 000 persons involved in their production and marketing. The immediate possibilities for affected farmers to turn to other crops are limited.

Haiti – rice: imports of rice increased from an average annual level of about 17 000 tonnes (milled equivalent) in 1984-89 to 226 000 tonnes in 1995-2000, a thirteenfold increase. The decline in production in the corresponding periods, however, was modest, from about 84 000 to 78 000 tonnes. Although it is difficult to estimate the extent to which production would have increased if not for the massive imports, analysts believe that imports played a major role in negatively impacting rice production.

Kenya - dairy products: the Kenyan case presents a good example of the link between the surge in the import of dairy products and domestic production of milk. During 1980-90, the volume of milk processed rose steadily from 179 000 to 392 000 tonnes, i.e. by more than 100 percent. From 1990 onwards, the volume processed fell dramatically to as low as 126 000 tonnes of milk in 1998. At the same time, the imports of milk powder rose from 48 to 2 500 tonnes (in fresh milk equivalent, 408 000 litres to 21 million litres). The influx of the imported milk powder, as well as other dairy products, depressed the demand by milk processors for fresh local milk. Small milk producers in particular bore the brunt of the impact. Also, Kenya's ability to diversify into processing activities was undermined.

food products. There were even cases, like that of the maize sector in Malawi, where import surge did not stop the price from rising. The main reason was the various forms of market segmentation prevailing in many developing countries. A spatial segmentation of the market isolated the impact of the import surge on limited areas as it is often the case in the segmentation of urban versus rural markets or of accessible versus landlocked areas. Another form of segmentation that is part of the explanation is based on product differentiation as the imported and local products had different clientele. Similarly, the two products may not be viewed by consumers as competing substitutes. In these cases, the weighted average price at national level is little affected by the surge. However, these observations require further analyses to provide more evidence.

8.3 Decreases in volume of production, market shares and profits

The decline in domestic production as an immediate consequence of the import surge stems from the idea that an import surge lowers farm price and thus, reduces the farmers' production incentive. This is supported by the evidence from the country case studies such as in the case of rice and poultry in Cameroon, dairy products in Sri Lanka, and vegetable oils in Mozambique. There is however some counter examples where import surge did not affect the volume of production as the case of rice in Côte d'Ivoire and poultry in Jamaica showed.

Similarly, in almost all of the sectors investigated, the volume share of domestic production out of the total supply fell when import surge occurred. This is not surprising especially in cases where the farm prices had also fallen. In cases where the farm prices were not affected by import surges, the market share still shrunk because the growth in the volume of import outpaced the growth in domestic supply. Similarly, in many countries, the value share of the sale from the sector in which the import surge occurred had declined. The only exception to all those shrinking shares is the poultry sector in Jamaica where the volume and value shares increased despite the incidence of import surge. This again indicates that the domestic poultry meat and the imported one grew apart with separate markets and different clientele.

The decrease in profits for many of the sectors investigated was a direct result from the fall in either output price, volume or both. The severity of the negative impact of the surge on profit however differs considerably. While most of developing countries' affected sectors survived the shrinking profits, a few such as Jamaica's onion and dairy sectors did not resist and collapsed altogether.

In general the shrinking profits affected mostly small farms (e.g. in rice, dairy). Large farms (such as the large dairy farming in Kenya), perhaps because of their capacity to cope with the price risks, were least affected. Similarly, the profit in the sectors whose price import surges were not affected remained in general unscathed.

Uncertainties generated by the sudden increase in import might have already harmed the revenue and incomes of producers and processors in the sector but the case studies could not cover them. For instance, some of the output price volatility associated with the surge (and the measure taken to adjust to it) required immediate adjustment on the amount of input uses but as local producers did not foresee such volatility, they may have already purchased more (or less) inputs than they actually needed. The surplus (or shortage) of input could generate some additional costs (e.g. input storage costs in case of surplus, or higher input prices in case of shortage) to their activities. Investigating these risks would contribute to a complete account of the impact of import surges.

8.4 Any beneficiaries beyond consumers?

Analysts and policy-makers often focus on the negative impacts of import surge and overlook some of its positive impacts. Beyond consumers' increased welfare stemming from the fall in price and the widening of consumers' choice (as the import surge brings about a source differentiated product), others such as manufacturers, marketers and transporters and even taxpayers at large often benefited from the surges. The case studies revealed that dairy processors, especially the large ones, in Kenya and the United Republic of Tanzania, reported benefiting from the import of low priced powder milk. Taxpayers may also benefit from import surge as the revenue on import tax rises, even if the tariff is relatively low. The positive impacts of import surge may also expand to other sectors where the increase in import of the cheap dry milk, for instance, may have boosted production and sale in food and beverage manufacturing using the dry milk as one of its inputs. As mentioned, a sector like Jamaica's domestic poultry industry grew despite the surge in poultry import, and as the stakeholders' survey pointed out, Jamaica's broiler producers have clearly gained. In Malawi, stakeholders (except the small-scale producers) agreed that, overall the surge in the import of maize, milk and sugar benefited them and were not in general harmful to any of them.

Externalities of import surge also include the spillover effects on the sector's R&D assets as trade may have facilitated the transfer and adoption of technology in developing countries. Moreover, taking into account the health and environmental effects of the imported products would have made the assessment of the surge's impact more accurate.

8.5 Non-attribution analysis

Identifying the causes of an injury was complex because of numerous causes involved. Making sure that an observed injury is caused only by an import surge were even more complex in the developing countries' case studies because of the lack of information on other factors explaining the changes in import volumes. On a particular injury (e.g. the declines in domestic production and market share), the developing countries' internal causes constitute most of the non-attribution factors of import surge. The non-attribution factors include the various taxation of agriculture, lack of infrastructure to release products from fertile but landlocked areas, and removal of input subsidies. A non-attribution factor includes also official government programmes like in the United Republic of Tanzania's SGR, which have had a capacity of 150 000 tonnes of maize; the project was suspected of having depressed domestic prices during procurement, emergency release and recycling of its stocks.

8.6 Concluding remarks: some unaddressed measurement issues

8.6.1 Dynamics of the impacts of import surge

Investigation of the impacts of import surge in developing countries may be biased as the

measurement is often limited to the immediate aftermaths of the surge, and does not extend to the examination of the impact over time. The following is a typical example showing the ambiguity arising from the lack of analysis of the impact over time. An upward shift in demand or a supply shortfall, for instance, increases domestic prices and the shift should benefit the domestic producers. The domestic sector is however unable to respond to the shortage, or the government does not allow the price to be too high so almost at the same time import is allowed to increase the amount supplied. The imports will gradually curb the initially high price and increase the share of import in the domestic market, but the fall in price will affect the domestic supply negatively. So in this case, the domestic sector initially gains when the shortage occurs, but then the sector loses out to the import products later. In the end, whether the producers gain or lose overall is unclear.

8.6.2 Causality and sequence problems

One particular case of the lack of clarity on the effect over time is the confusion over the sequence and timing leading to the import surge's impacts which then creates an ambiguity on the estimation of the actual impacts. Comparison between two cases shown in Diagram 8.1 illustrates the ambiguity. In *case* (a) where an import surge, resulting from, for example, a tariff reduction, which is a familiar case in many developing countries, may have a negative impact on domestic prices especially when the import and domestic products are related (e.g. for products that are substitutes). The import surge, in this case, may lead to a domestic supply shortfall as the depressed price discourages the farmers' incentive to produce more. In this example, it is clear that the injury, the falling price and falling domestic production, is caused by the import surge and more precisely by the tariff reduction.

There is however, also a different situation shown in *case* (b) in which a supply shortfall, caused by supply shock events such as bad weather conditions, triggers the coming of an import surge, lowering both the volume and price of the domestic production. Analyses showed for instance that this was the case for the United Republic of Tanzania's rice and maize sectors for which the changes in import volumes were associated with changes in domestic market prices. In this latter case, what one may observe is only the cumulative effects leading to the outcome in stage (iv) in *case* (b), namely the reduced domestic price and production. However, the analyst may need to distinguish the direct impacts of the import surge from the impacts of the bad weather conditions on domestic production and price. This is important because as the diagram shows, the import surge in stage (iii) is only responsible for affecting the outcome in stage (iv) and cannot be held accountable for any outcome prior to (iii). In the country case studies, the lack of data and monitoring made the assessment based on the distinction between the two impacts extremely difficult. This problem is not much different from the non-attribution problem, except that the timing and sequence of the events leading to the injuries, rather than the type of simultaneous competing sources of injuries, are more relevant.

DIAGRAM 8.1
Causality and sequence in an import surge study

case (a) : (i) Tariff reduction→ (ii) Import surge → (iii) Low price and low domestic production

case (b): (i) Bad weather → (ii) Low domestic production but high price→ (iii) Import surge → (iv) Lower domestic price and lower domestic production.

8.6.3 Path-dependence (persistence)

Another source of confusion is on the possible path dependent effects of the import surges. In many developing countries, events such as bad weather or outbreak of plant and animal diseases have caused severe supply shortfalls, and eventually a sudden increase in domestic price triggers an Import surge. As the import grows, the domestic price starts to fall but by how much it falls depends on the market conditions. If the new price remains above the price before the event (bad weather or plant or animal disease outbreak) happens, domestic production may continue to rise. But it may also be the case that the new price falls below the price before the supply

shortfall (i.e. an overshooting of the import surge and causing a net loss to the producers), and as a result, domestic production may further shrink. The decline in domestic production will trigger more imports and the cycle continues over time until the entire domestic sector collapses. Here the challenge for the assessment of the consequence of import surge lies not only in the identification of the sequence of events, but more importantly in the dynamic and path dependent effect following the starting event.

References

Sharma, R., Nyange, D., Duteutre, G. & Morgan, N. 2005. The impact of import surges: country case study results for Senegal and Tanzania, FAO Commodity and Trade Research Working Paper No. 11. Commodities and Trade Division, FAO, Rome.

RESPONSES TO IMPORT SURGES IN DEVELOPING COUNTRIES

9

9.1 Overview of the types of responses

When import surges led to losses of profit and market shares for some stakeholders, some measures were taken to compensate for, or at least stop these losses. In the case studies, responses and corrective measures came from within the affected sector itself and from the case study countries' governments. This chapter analyses some of these measures in the selected case study countries affected by import surges and evokes the difficulties related to the determination and implementation of these measures. Table 9.1 summarizes some of these government measures that the case studies revealed. Some of the reasons why inactions were seen in some cases are also discussed.

9.2 Sector responses

Boosting productivity and competitiveness is the most common response from within the sector facing the fallout of import surges. Reduction of production costs and adoption of technology are some of the responses from small-scale producers and large processors alike. Stakeholders' interviews revealed that the efforts or at least the willingness to increase productivity and competitiveness could be traced from the sectors' plans to cut production costs and adopt new technology to stay in business. In Kenya for instance, the increase in the local milk production despite the dairy import surge were the result of the extended use of artificial insemination and access to animal care (e.g. vaccines, sanitations and nutrition). Similarly, poultry sectors in many of the selected countries, from Cameroon to Jamaica, have also embraced technological change and increased animal care especially in intensive farming system and in peri-urban farming. In many cases these efforts had started long before the surges occurred but the occurrence of the surges reinforced the motivation to boost productivity and competitiveness. Sectors' responses, however, depended much on governments' accompanying programmes such as public investment in education, infrastructure and communication.

9.3 Government interventions

9.3.1 Import restriction and tariff hike

Most of the selected countries in the case studies were already WTO members and are therefore theoretically bound by WTO rules, including a commitment to freer agricultural markets and trade. But when production in key sectors such as food and feed grains were challenged by import surges, governments sometimes reneged on their commitments to open up the food and agricultural markets. Restricting the imports was one the most immediate reactions from governments to protect the import competing sector against any import surge. In Cameroon, Côte d'Ivoire and the United Republic of Tanzania, for example, the tariff was increased for poultry, rice and poultry import respectively. Also in Côte d'Ivoire, for instance, the Government decided to suspend all sugar imports between 2004 and 2006. A similar ban took place in Cameroon following the surge in poultry import. Another form of restriction is the setting of a minimum import price for poultry

TABLE 9.1
Policy responses to import surges

Country	Commodities	Trade policies (increase in tariff)	Import ban	Price control	Trade surveillance
Cameroon (1999-2004)	Poultry	Raising tariff	Partial ban	Set a minimum import price	Weak
	Rice	Procurement			Weak
	Vegetable oils				Weak
Côte d'Ivoire (1996-2004)	Rice	Raising import tax			Relatively advanced
	Poultry				Weak
	Sugar				Weak
Ghana (1998-2004)	Rice				Weak
	Poultry				Weak
	Tomato paste				Weak
Honduras (1991-2005)	Rice				Weak
Jamaica (1980-2005)	Dairy				Weak
	Poultry				Weak
	Onions				Weak
Kenya (1973-2003)	Dry milk powder				Weak
	Maize				Weak
	Sugar				Weak
Malawi (1980-2004)	Dairy				Very weak
	Maize				Very weak
	Sugar				Very weak
Mozambique (2001-2004)	Poultry meat		Complete ban on trans-shipped products (Certificate of origin needed)		Weak
Mozambique (2002-2004)	Vegetable oils				Weak
Philippines (1999-2004)	Onions				Comprehensive, relatively structured
	Tobacco				Comprehensive, relatively structured
Sri Lanka (1985-2005)	Dairy products				
The United Republic of Tanzania (1997-2004)	Dairy	Import tax 25% and later 20% (in addition to tariff on most favoured nations			Weak
	Maize				Weak
	Rice				Weak

Box 9.1
Safeguard mechanisms with regard to developing countries: agreement of Safeguard and SSG provisions on the AoA

The basic requirements for implementation of WTO-compatible trade remedy measures, whether under current SSG arrangements or under a possible future SSM provision include data, trade monitoring and surveillance arrangements, analytical capabilities and frameworks for appropriate consultations with stakeholders. The availability of reliable and timely data is essential for the accurate monitoring of trade developments and for the assessment of their impacts on domestic markets. Many developing countries experience severe difficulties in systematically collecting such information. There are indications that many developing countries need to enhance their analytical capabilities for dealing with import surges. Various analytical tools, such as those introduced in Part I of the this document, have been designed to assist in this effort and these should be made available to interested countries. The SSM should be designed in a manner that, aside from being simple and easily accessible, it is effective in safeguarding against disruptive import surges with minimum adverse effects on agricultural exports, including those from other developing countries.

The key distinguishing feature of an SSG from that of the general WTO trade remedy measures is that the latter requires proof of injury from imports while the former does not. In this sense, the SSGs are very attractive. The new SSM is expected to be similar to the SSG. However, the question asked is whether anything is known about injury in cases where countries faced surges (including depressed import prices) and resorted to the SSG, or not because a response was not deemed required. The answer is unfortunately no, because first the members are not required to provide any information to the WTO on the injury, and second, there are no studies that have looked into this matter. So, very little is known on what happened where SSGs were triggered or were not triggered.

Given the relevance of the SSG to the import surge case studies, what follows summarizes briefly the developing country experience with the use of the SSG:[1]

- the overall "utilization rate" of SSGs was very low (about 1 percent for 22 developing countries and 5 percent for the six users).[2] The question is why is this the case if import surges are such a big issue. The full range of the reasons is not known, but the following appear likely;
- there was no need for responding because either: i) no "external shocks" were felt (which is however unlikely); or ii) the shocks could be absorbed, i.e. no negative effects;
- bound tariffs were high enough and so SSGs were not needed;
- policy-makers chose not to respond to the shocks for a variety of reasons, domestic legislation or the Structural Adjustment Program (SAP) conditionality prevents raising applied tariffs or using SSGs, conscious policy decision that response was not needed;
- SSG users have found both volume and price SSGs useful, although there were more cases of the price SSG, does this mean that the main issue is price depression and not volume surge?
- hardly anything is known about the effectiveness of the SSG in alleviating the problems, i.e. curtailing imports and preventing transmission of low prices;
- similarly, little is known about effects (injury, or prevented injury, and who gained and who lost in the process), no formal reporting is required on the injury side in the case of the SSG.

The Safeguard Measures Act of the Philippines in 2000 enables the Government to implement safeguard provisions under the WTO AoA. As a result, SSG duties were implemented to respond to import surges of some agricultural products (e.g. onions and tobacco).

[1] This is based on FAO publication on SSM (FAO, 2005). See Kommerskollegium (2004) for discussion.

[2] Note that only 22 developing countries had reserved the right to use the SSG for a total of 2 125 tariff lines. Of these 22, only six have used SSGs since 1995.

Box 9.2
Jamaica's response to import surges

Poultry cuts: the import of poultry meat has often surged in the past decade, often to the detriment of the poultry sector. There have been several calls from the industry for AD or similar actions. In response, import reference prices were established for customs valuation purposes - in 1993/94, and the duties on leg quarters were levied on the basis of the average c.i.f. price of USD 0.52 per pound.

Sugar: as with poultry cuts, Jamaica also faced difficulties in regulating the import of sugar. In response, the Government set reference import prices on the basis of five-year moving averages of world market prices, at about USD 0.20 per pound initially in 1995 and slightly more in later years.

Sources: FAO, 2000 and FAO, 2003.

products in Cameroon. Box 9.1 summarizes some of the measures taken with regard to safeguards and within the WTO negotiation framework.

9.3.2 Reversing the domestic market reforms

The case studies revealed that while marketing boards were dismantled in some staple food like rice in Côte d'Ivoire, they were still operating for some other key staple commodities and especially for many high value commodities like sugar and tobacco in many other countries. For sugar for instance, countries in East and Central Africa had been keen to maintain their Marketing Boards to control prices out of the fear of the invasion of cheap sugar imports. These measures along with the increase in tariffs have been a setback to the liberalization process at both regional and global levels. This seems ironical especially because the policy reforms somehow had contributed to import surges and in return, the occurrence of import surges forced the Government to reverse the liberalization process. However, it should be pointed out that the reversal of market and trade reforms as a measure against the surge was found only in a few, not all cases. An illustration of the actions in Jamaica is reported in Box 9.2

9.3.3 Investment and addressing market failure

Investments in technology and infrastructure to improve productivity (rice in Asia, Africa) and competitiveness have always been part of developing countries' programmes but the implementation has remained at best patchy. The case studies also reported attempts to correct market failure, for instance by encouraging more competition among input providers or sometimes subsidizing input directly. There are also attempts to stabilize prices in order to quell the risks born out of price volatility as in the case of the United Republic of Tanzania's grain reserve project. The full impacts of these interventions on both producers and consumers are however unknown.

9.3.4 Monitoring and trade surveillance

It is common knowledge that a majority of the developing countries lacked the resources to monitor imports, let alone have the analytical capacity to predict and assess import surges. In the case study countries, there were only two exceptions. In the Philippines, a relatively advanced trade surveillance system allowed for timely reactions to import surges. Similarly, Côte d'Ivoire had developed a rice trade monitoring capacity whose effectiveness is however limited by the undocumented trade going through its porous borders. But even in these two countries the need for monitoring and analytical capacity remained far greater than what was available.

9.3.5 No direct interventions: should import surges be encouraged?

Governments chose not to intervene in many cases because they felt that following the import surge, the overall welfare did increase despite the losses that small producers incurred. In the cases of milk, sugar and maize in Malawi, maize in the United Republic of Tanzania and poultry in Jamaica, the majority of stakeholders even wanted more, not less, imports. In some cases, import was encouraged, even in the short run to ensure a stable food supply. The

Strategic Grain Reserve (SGR) project in the United Republic of Tanzania was an example of such an act of encouragement.

9.4 Concluding remarks

Despite some forcible arguments on how import surges are really hurting domestic production and how they should be stopped, the case studies showed that actual interventions to counter import surges or to correct the injury in developing countries were few and, in general, ineffective. The affected sectors acted to increase productivity and competitiveness but these actions depended on governments' wider programmes on correcting market failure and investing in agriculture. On the other hand, governments' concerns about price surge and instability have limited their ability to counter import surges, especially when domestic industries' productivity and competitiveness lagged far behind those of the importing sources. Muted reactions from developing countries' governments reflected a perception among the majority of interviewed stakeholders including large processors, traders and consumers who felt that more imports were beneficial. Also, lack of resources and capacity on the part of government to monitor and implement available instruments and formulate new measures hampered any actions to stop the surges. Additionally, the dilemma about priorities especially on whom to protect (e.g. consumers versus producers, or small versus large producers) further delayed the governments' reactions. Indeed, governments often tread the fine line between their commitment to trade agreements and their desire to protect their domestic agricultural sectors. Raising the import barriers immediately would have led to increased food price and socio-political problems. Nevertheless, both the governments and agricultural producers were aware all along that their main actions should have been aimed at increasing the levels of competitiveness and productivity.

References

FAO. 2000. *Synthesis of the country case studies, in agriculture, trade and food security: issues and options in the WTO negotiations from the perspective of developing countries. Volume II, Country Case Studies*. FAO, Rome, 2000.

FAO. 2003. *WTO Agreement on Agriculture. The implementation experience: developing country studies*. FAO, Rome.

FAO. 2005. *A Special Safeguard Mechanism for Developing Countries*. FAO Trade Policy Technical Note on Issues related to the WTO Negotiations on Agriculture No. 9, FAO Rome.

Kommerskollegium. 2004. The Agreement on Safeguards: use of the instrument, problem areas and proposals, National Board of Trade, Stockholm, Sweden. www.kommers.se

CONCLUSIONS AND IMPLICATIONS

10

10.1 Summarizing the approach and findings

Many developing countries perceive that import surges in many agricultural commodities have harmed profits and market shares and led to the collapse of some import competing sectors. Whether or not these perceptions were founded remained unanswered. Questions were also raised on what one should do to compensate for the losses or to avoid the alleged injuries. The responses to the surges, from partial to full import restrictions to protect the import competing sector often lacked rigorous analysis that justified their implementation. More importantly, it was unclear whether the observed injuries originated solely from the import surge or from other causes. There was therefore a need to examine the evidence of an import surge to increase the understanding of its causes and impacts and to draw implications of how the surge can be dealt with. Responding to such a need was the purpose of the set of investigations that this book synthesizes.

This book specifically delved into the theoretical and WTO legal framework on how to identify import surge and its sources and on how to measure its impacts. It also outlined some, not all, of the actions to correct the distortions that the import surge may create. The framework was then employed to analyse import surge in selected developing countries' import competing sectors to gather evidence in an attempt to identify the import surge's occurrence, its sources and impacts, and actual measures that government and private sectors have taken. The investigation relied both on basic statistical methods and interviews with stakeholders.

The first part of this book covers the theoretical concepts of and legal framework governing responses to import surge. It highlighted, in particular, the vagueness of the definitions and terminology of import surge and injuries the surge potentially causes. An import surge is commonly known as a sudden and short-lived increase in import but has no standard definition as to its exact duration and threshold (or trigger point). Both domestic and foreign factors can lead to an import surge and often the combination of these factors becomes important as the main cause. An import surge is often seen as a negative event but it can also have positive consequences. Its consequences can be measured through the changes in the values of indicators such as price; production volume, market share and profit; and employment. Governments and private sectors have in theory various tools to deal with import surge and its impacts; these tools range from immediate import restrictions to long-term investment in technology to improve competitiveness and productivity. The first part of this book also devotes an entire chapter that addresses the methodological challenge in defining and identifying import surge, its sources and its impacts. An FAO framework to guide import surge studies is presented.

The second part presents the import surge evidence from the FAO country case studies. The case studies showed that import surges did occur in these countries for a variety of reasons. These included both domestic causes (such as fledging productivity, lack of competitiveness, trade and market reform policies, weak institutions and market failures) and foreign causes (such as dumping of products). These findings,

however, do not support a widely–held prejudice that trade liberalization itself is a major cause of import surge, although trade liberalization was one out of many contributors to the surges.

The extent of the consequence of import surges also varied widely across products and countries and the perceptions over the impacts were also mixed among various stakeholder groups. While import surges caused minor or no decline in profit or market shares in some cases, they provoked the collapse of the entire sector in other cases. Similarly, while small- scale producers were feeling harmed by import surges, others such as large-scale producers, processors, traders and especially consumers, claimed benefits from the import surges. This observation raised difficult political economy dilemma over responding to (e.g. preventing) the surges. The studies were inconclusive about the surge's full impacts and externalities. The case studies also revealed the difficulties in distinguishing the injuries caused by import surges from those inflicted by other sources; this confusion about which factor really contributed to the injuries complicated the determination of the appropriate responses to import surge.

Governments' reactions to import surges also varied greatly across countries and across sectors; they ranged from complete or partial import bans and raising tariffs in a few cases to, surprisingly, inactions in many cases. A lack of response appeared to have reasons and interpretations, including the inability to counter market force which harmed producers but favoured processors and consumers. Nevertheless, governments and import competing sectors have been increasingly aware of the need to foster long-term strategy to spur productivity and competitiveness as one of the best ways to reduce the negative impacts of import surges on small-scale producers.

10.2 Implications: what can be learned from the case studies?

10.2.1 No single approach for the study of import surge

There is no unique approach to the identification of import surge, its sources and its impacts because of the heterogeneity of the sectors and countries. Developing countries vary greatly and the sectors within a country also have different stakes with regard to import surge. But as in the case studies reported in this book, the combination of statistical analyses and direct interviews with various stakeholders seems to be a reasonable way to study import surges.

10.2.2 Institutions, productivity and competitiveness are key to prevent surge

Open economies with strong market and market institutions, and sectors equipped with risk management tools, are able to adapt more easily to the fallout from import surge. Similarly, for sectors where consumers value product variety, a competitive domestic sector may survive the sudden surge in import. On the contrary, weak and uncompetitive domestic sectors lose out fast to import surge. Improving productivity and competitiveness in the import competing sector remains the best way to fend off the fallout of an import surge on producers. The evidence put forth in the case studies indicated that low productivity and lack of competitiveness made the domestic sector vulnerable to the import surge phenomenon.

10.2.3 Need for a full account of import surge consequences before intervention

The case studies showed that a holistic approach will be needed for responding to the import surge. Unless a full account of the impacts on all agents (producers, consumers, etc.) and related sectors is undertaken, it is difficult to make an informed judgement about whether to respond or not to surge and to what extent and how.

10.2.4 Need for clear political economy and priority setting

The handling of an import surge stems from the political economy that sets priority of whom to protect first. No single measure is going to satisfy all stakeholders but if fighting poverty in rural areas is, for instance, the priority, then finding ways to help small-scale farmers deal with the surge could be the right action. If the priority is to avoid the sudden disruption of local production which may entail the losses of local jobs and livelihoods of the majority

of poor producers, then the safeguard measures are indeed justified.

10.2.5 On the trade off between pursuing agricultural market and trade liberalization reforms (openness), and protecting import competing sector: is it really an issue?

Import surge has been allegedly perceived as a symptom of the setback of the trade liberalization process and often left governments in developing countries wondering whether the process should be stopped and reversed in order to protect the import competing sector. But based on these case studies reported in this book, import surge cannot always be used as an excuse to stop market and trade liberalization and protect domestic industries for at least three reasons. One reason is that the surge does not originate solely from trade liberalization but from a host of factors including weather conditions, low level of productivity, etc. Thus, halting trade liberalization alone may not alter the incidence of the surge. The second reason is that although import surge hurts some stakeholders, trade openness may actually strengthen some of the links in the sector's value chain (e.g. processing, consumption, trades) so that protecting the sector when import surge occurs may squander these opportunity gains. A third reason is that safeguard measures against short-lived import surge are not sustainable and may not protect and hide the sector's lack of efficiency and competitiveness indefinitely; the trade liberalization and reforms may expose rather than cause the inefficiencies of the import competing sector. For these reasons the need for safeguard measure against import surge should be viewed and used as they are intended to achieve as temporary and necessary measures to prevent the sudden disruption of domestic production and the disastrous impacts on domestic farmers and workers. The safeguards are not conceived to counter trade flows indefinitely.

10.3 How do these findings square with other studies?

The literature on agricultural import surge in developing countries has been scarce but some organizations (Christian Aid, World Bank, Oxfam) have performed a number of studies to raise awareness of the consequences of the import surges on domestic sector. Annex 11.1 summarizes some of these studies and findings. Although the methods employed to examine import surges differ, the findings are similar to those reported earlier especially on analysing the responses to the surges. However, some of these past studies put too much emphasis on the role of trade policies and domestic market reforms as being the main responsibility for import surges and attributing the injuries to import surges, while the case studies reported in this book went steps further and identified other major causes of the surges.

10.4 Moving forward: import surges in the current context

10.4.1 Trade monitoring and capacity and rigorous analytical framework

Monitoring and analysing the consequences of import surges is important, and so more resources should be devoted for this purpose. It is important that developing countries set up trade monitoring and build market and trade capacity for more effective and better policy-making and for information sharing between government officials and private sectors. All the case studies showed problems with analytical framework for dealing with import surges. Therefore, improvements are needed along with the search for more reliable data.

One example of quantitative information that is often missing when policy-makers are weighing on what to do with import surges has been the impact of surges on employment. Perfect mobility of labour between sectors does not often apply especially for workers in food processing and manufacturing. While rice farmers out of business may switch with some ease to grow, for example, potatoes or peanuts, recently-fired dairy workers may not be immediately prepared to develop the skills required in tobacco manufacturing or fishing industries. Such stickiness of the labour market hinges on the overall employment cost of the import surges to justify the use of safeguards but requires thorough analyses. The literature provides numerous techniques for *ex ante* analysis that can be fine-tuned for specific country situations and allow timely and appropriate responses to import surges.

10.4.2 Poverty and food insecurity

One way to make interventions related to import surges effective is to focus directly on integrated measures towards the development goals of reducing poverty and achieving food security in developing countries. A single measure on import surge may compromise at least one of these two goals. If, even for a short period, the surge can relieve hunger and bring required nutrients to poor consumers but will put poor farmers out of business, the decisions on whether to allow or stop import surges depend on the government's main priority. The difficulties lie in defining the priorities (beneficiary groups, the benchmark on prices and volume) and can be seen from the examples of the different suboptimal reactions of developing countries' governments to the 2006-9 sharp swings in food prices. Some governments may have overreacted while others did not intervene at all, but whatever their decisions were the government may have unknowingly harmed their intended beneficiary. One then can agree that if safeguards are to be implemented to counter import surges, some accompanying measures may be needed in the form of compensation for the most vulnerable persons on the losing side (e.g. poor urban consumers). The only caution is that policy-makers need to be aware that both the safeguards and the series of accompanying measures are temporary tools that cannot be sustained if used indefinitely against market force.

APPENDIX 10.1
EXAMPLES OF OTHER IMPORT SURGE STUDIES

1. Study by the Association of World Council of Churches related Development Organisations) (APRODEV) partners, 2003-04

Cameroon and West Africa – chicken parts: at a meeting in Brussels between NGOs and European Union officials in June 2005, APRODEV presented a 170-page research document prepared by a Cameroonian partner organization on the impact of massive frozen poultry imports from the European Union into Cameroon and West Africa. The document mentioned that Frozen chicken imports into Cameroon had increased by 2 100 percent in just six years, amounting to 60 percent of local consumption. At the same time, local production fell by 38 percent between 2000 and 2003 alone and many producers (92 of the 100 studied) had to abandon the activity as the price of chicken meat fell due to imports.

According to the document, imported chicken has caused unemployment for 111 000 people. Another case discussed was meat infected by salmonella and other dangerous microbes and up to 85 percent of the sample tested was found to be unfit for human consumption. The study also found that local maize and coarse grain farmers (as the main chicken feed) were harmed by the decline in the sale of local poultry. The APRODEV document also blamed home country customs administrations for corruption. For example, in 2003, total imports amounted to 22 000 tonnes while the authorized official quota was not higher than 8 500 tonnes.

In discussions with European Union officials and business circles, all agreed that there is a problem, and did not dispute the destructive nature of this trade. However, there was a lack of clarity on all sides about the sources of the problem and what to do about these.

2. Studies by Action Aid (the Gambia) (Ceesay and Jagne [2000] and Ceesay, Njie and Jagne [2005])

The Gambia – poultry (Ceesay and Jagne, 2000): the study reports that there was unfair competition between subsidized imports from the European Union and local production of poultry. The impact is shown in terms of reduced market prices that undermined competitiveness and profitability. This further led to business closures and job losses. The analytical content of this study is very weak when it comes to presenting injury indicators and establishing a causal link between imports and injury. The study also recommends tariff protection for the local poultry industry.

The Gambia - poultry meat and eggs (Ceesay, Njie and Jagne, 2005): this repeat study undertaken five years after the previous one is somewhat more detailed. The focus is on three types of poultry producers, backyard, small- to medium-scale and large-scale commercial. It also surveys hotels, supermarkets and other outlets and discusses aspects of consumer preferences. It finds that imports of poultry meat into the Gambia have increased while tariffs declined. The cost of production of local poultry is found to be markedly higher than that of imported meat, which is said to have been "dumped" in view of the subsidies in the European Union. Injury indicators reported include price undercutting and business closures.

3. Cases reported in a Christian Aid document (Christian Aid, 2005)

Senegal - tomato industry: prior to trade liberalization that began from around 1994, Senegal had a thriving tomato industry and had become the twenty-third largest tomato producer in the world. Producers sold tomatoes to state-owned tomato-paste factories. As tariffs were lowered and Senegal's

tomato paste factories were privatized, the industry took its toll as imports of subsidized tomato paste from Europe surged. The tomato paste factories stopped buying local tomatoes as it was cheaper to convert imported triple-concentrate tomato paste into double-concentrate paste for local sales. With imports soaring from 221 tonnes in 1993/94 to 4 600 tonnes only three years later, the prices received by farmers fell from XOF 50 to about XOF 25 a kilo during this time. By 1996/97, local tomato production had fallen to only 20 000 tonnes, from 73 000 tonnes in 1990, with other negative effects.

Senegal - poultry industry: growing urban demand has over time led to the development of semi-industrial poultry farms and supply industries around major cities. By 2000, these farms were already producing around a third of the country's total poultry meat, with smaller traditional farms supplying the remaining two-thirds. All this changed in 2000, when the Government lowered tariffs on imported chicken parts from 60 to 20 percent, as part of tariff adjustments related to WAEMU and the country's SAP. The effect was an eleven-fold increase in the volume of chicken meat imports between 1999 and 2003, three-quarters of it from the European Union and mostly in the form of frozen chicken parts, which sell for as little as half the price of the local equivalent. As a result, chicken prices depressed in Senegal and local chicken production dropped by a third, leading to around 2 000 job losses, closure of seven out of every ten chicken farms in Senegal, and a huge negative impact on small farmers. The collapse of the chicken industry has also cost many of Senegal's maize farmers their livelihoods.

Ghana – tomato industry: between 1993 and 2003, there was a staggering 628 percent increase in processed tomato imports into Ghana. In 2003, 27 000 tonnes of prepared European Union tomatoes entered Ghana, at a cost of EUR 25 million in lost foreign exchange, and overtook the market for locally processed tomatoes and further depressed the expansion of the domestic tomato-processing industry. Imports have also shifted consumer tastes in favour of imported tomato paste, filled with additives, which threatens future growth of the local industry. There is a consensus among stakeholders that two policy measures will be needed to help the infant tomato-processing industry take off, tariff protection and production support. The SAPs most probably will prevent the former measure. The influx of tomato paste from Europe is of particular concern because local processing can provide a safety valve for the fresh tomato market when there is a glut, the excess can be canned or made into concentrate to save it from perishing. This is of great importance to Ghana's large number of poor tomato farmers who, in spite of a lack of firm links into the processing and marketing chain, still grow tomatoes.

Ghana - poultry industry: Ghana imports more than 30 percent of total European Union frozen chicken exports to West Africa. With reduced tariffs under SAPs and WAEMU, West Africa as a whole has seen an eightfold increase in European Union chicken imports. Between 1993 and 2003, there was a 144 percent rise in the already high level of poultry meat imports into Ghana. Although consumers are dissatisfied with the quality of the imported meat, most of them eat imported meat because it is significantly cheaper than locally produced and processed chicken. Locally grown broilers are sold at Ghanaian Cedi (GHC) 28 000 (Pounds Sterling [GBP] 1.60) per kilo, whereas poultry imported from the European Union costs only GHC 16 000 (92 pence) per kilo, less than the local cost of production. As a result of these developments, the livelihoods of some 1 000 registered and many more unregistered small-scale poultry farmers are said to be now under threat, and already there are signs that the industry is collapsing. The National Poultry Farmers' Association estimates that tariffs would need to be in the region of 80 percent (bound level being 90 percent), four times their current level, to allow local producers and processors to compete fairly with European Union imports.

4. OXFAM studies on dairy products, rice and maize (OXFAM, 2002, 2003 and 2004)

This study reports three cases of the effects of import surges, along with an analysis of the causal factor, which is the European Union dairy policy that generates "surges" on account of domestic and export subsidies.

Dominican Republic – whole milk powder (WMP): national dairy consumption doubled in the 1990s and the rising demand has largely been met by imports while domestic production has been stagnant. The volume of dairy imports more than trebled during the 1990s, reaching 325 million litres in 2000. The European Union accounts for a major proportion of the imports. According to the study reported in the document, the price of European Union milk powder imports systematically undercut the local price of fresh milk by 25 percent, in part because of the European Union's export subsidies. The Dominican Republic was then the fifth most important market for European Union WMP exports. Around 10 000 farmers are estimated to have been forced out of business during the past two decades, in spite of considerable investment in the dairy sector by the Government and the industry itself. Most of the dairy farmers are small scale and suffer from poverty and food insecurity.

Jamaica – milk powder: trade liberalization in the early 1990s resulted in domestically produced fresh milk being pushed out of the market by subsidized European milk powder as the major input for the Jamaican dairy processing industry. The volume of subsidized European Union milk powder exports to Jamaica more than doubled during the 1990s. This had devastating consequences for local milk producers, many of whom are women running their own businesses.

Kenya – milk powder: the dairy sector in Kenya employs more than 600 000 small-scale farmers and accounts for around 10 percent of total Gross Domestic Product (GDP). The country is self-sufficient in milk production, but in 2001 Kenya experienced a surge in imports of European Union milk powder and butter. These products were imported by dairy and food processing companies, including multinational companies, at cheap (subsidized) prices. As a result, dairy and processing companies lowered the prices they offered to local producers for fresh milk to a level below domestic cost of production. After a lobby campaign by the Kenya Dairy Board, the Government agreed to double dairy import tariffs in order to protect local producers. The concern remains nevertheless that these short-term and ad hoc responses will not solve the recurring problem facing Kenyan dairy farmers.

Honduras – the *arrozazo* (rice scandal): the story began in 1991 when Honduras decided to drastically reduce rice import tariffs to make up for shortages from a drought. Imports naturally surged as needs were large, but there was no revival in production and so imports continued to rise. By 2002, rice production had fallen to 7 521 tonnes, equivalent to a reduction of 86 percent since 1991. Rice import amounted to 145 441 tonnes in 2002, the equivalent of 95 percent of consumption, compared with approximately 5 000 tonnes in 1989. The OXFAM study presents the analysis covering the reasons for the surge and importantly the injury side also. Producer prices plunged more than 28 percent in just one year, and continued until 1994 to a record low. As a result, areas under rice cultivation fell markedly. Quantified injury indicators include the sharp reduction in the farming households (from about 25 000 in the 1980s to about 2000 at present) and large-scale loss in direct and indirect jobs.

This case is somewhat similar to that of rice in Haiti. What is not clear in both cases, however, is what prevented the revival of the rice farming? In the SA, a situation like this would be known as "material retardation", imports prevented the revival of the industry following a shock.

Mexico – maize: OXFAM has argued that NAFTA has been responsible for a surge in United States maize exports to Mexico and that it contributed to the decline in the real producer price of maize, with hardships for maize farmers (OXFAM, 2003). This study first analyses maize subsidies in the United States as the source of the dumping. It was claimed that the resulting flood of imports has resulted in an increase in poverty of the 15 million Mexicans who depend on maize as a source of income.

5. World Bank: do cheaper imports undercut domestic price? (World Bank, 2004)

Mexico – maize: the impact of NAFTA on the Mexican agricultural sector, notably on poor maize farmers,

has attracted considerable attention in the literature. Rather than a case of an import surge in the classical sense, these concerns are more about worsening trends in production in the face of rising imports, i.e. a case of longer surges. There are accounts of the loss of hundreds of thousands of agricultural jobs in Mexico. The *World Bank Trade Note* no. 18 (World Bank, 2004) looks at this issue by asking whether the removal of restrictions on maize imports suddenly drove down the producer price of Mexican maize toward the cheaper United States export price at the cost of Mexican maize production and poor farmers?

What may be relevant for the import surge case studies is the cointegration analysis of the United States-Mexican maize prices. Using monthly maize producer prices for the two countries, the authors find that Mexican maize prices fluctuated in tandem with United States prices before and after NAFTA and the margins that separated the prices in the two markets were virtually constant. If NAFTA had been the culprit of declining prices to poor farmers, one would see the evidence that imports were driving Mexican prices even closer to the United States price, which they did not.

The study notes further that Mexican maize farmers were afflicted by a severe decline in the purchasing power of maize, but this was a trend that pre-dated NAFTA by a decade or more. Moreover, there was no negative impact on the other injury indicator, Mexico's volume of maize production actually rose after NAFTA in 1994, and primarily because of the efforts of farmers, mainly poor and subsistence, producing rainfed maize. This is the type of sequence of reasoning that one finds in the subsidies dispute, notably on "non-attribution" issue. As in the subsidies disputes, these are very difficult matters to settle analytically.

References

APRODEV. 2004. *The effects of massive dumping of frozen poultry imports from the EU into Cameroon and West Africa*

Ceesay, M. & Jagne, M. 2000. *Dumping and food security: a case study from the Gambia*, November 2000. Study commissioned by Action Aid (The Gambia).

Ceesay, M., Njie, M. & Jagne, M. 2005. *The effects of importation of poultry meat and eggs on small-scale poultry producers in the Gambia*. February 2005, Study commissioned by Action Aid (the Gambia) and OXFAM International (the Gambia).

Christian Aid. 2005. For richer or poorer, Transforming economic partnership agreements between Europe and Africa. London.

Diagne, B.M. 2004. 'Study on the Economic Impact of Whole and Pre-Cut Poultry Imports on the Development of the Poultry Sector in Senegal', background report for Oxfam International

OXFAM. 2002. *Milking the CAP – how Europe's dairy regime is devastating livelihoods in the developing world.* OXFAM Briefing Paper No. 34, December 2002.

OXFAM. 2003. Dumping without borders: how US agricultural policies are destroying the livelihoods of Mexican maize farmers. OXFAM Briefing Paper No. 50, August 2003.

OXFAM. 2004. A raw deal for rice under DR-CAFTA: How the Free Trade Agreement threatens the livelihoods of Central American farmers, OXFAM Briefing Paper No. 68, November 2004.

World Bank. 2004. NAFTA and Mexican Maize Sector, World Bank Trade Note No. 18.



PART 3

SELECTED IMPORT SURGE PAPERS FROM THE FAO COUNTRY CASE STUDIES

ANNEX I

THE EXTENT AND IMPACT OF DAIRY PRODUCTS(DMP), SUGAR AND MAIZE IMPORT SURGES IN KENYA

(Report prepared by Mbogoh S. and Kegode P. for FAO, May 2006)

1. INTRODUCTION AND BACKGROUND

1.1 Background and the rationale for the case study

Agricultural production in Kenya, comprising both crops and livestock produce, is an important sector in the country's economy because it accounts for about 25 percent of Kenya's GDP and supports the livelihoods of about 80 percent of the country's population. Farmers in Kenya undertake mixed enterprises, and many of them keep some livestock (especially dairy animals) alongside crop farming wherever the agro-ecological conditions permit.

Kenya, like most other developing countries, is concerned about steadily increasing food imports, which are generally referred to as food import surges, and their impact on agricultural development in the country. In the 1994 Uruguay Round of the international talks and negotiations for an Agreement on Agriculture (AoA), an import surge is defined as a situation in which imports exceed a given threshold, as determined by certain established period values, that causes or threatens to cause serious injury to the domestic (i.e. importer country's) economy.

The food import surges phenomenon has attracted considerable attention in recent years. There have been increasing reports of the developing countries experiencing surges in the import of various food products, especially since the mid-1990s, and often with reported negative effects on local production and economy. Several such cases were reported in a number of country case studies undertaken by different institutions, including the FAO and several national and international civil society organizations. Many of those cases have focused on experiences with the implementation of the Agreement on Agriculture (AoA)--14 case studies in FAO 2000, 23 case studies in FAO 2003, and two country case studies in 2004.

This case study is part of an FAO project whose end goal is to document and analyze the capacity of the developing countries to identify, analyze and respond to import surges. The study specifically aims to: (i) document a surge or increase in imports; (ii) investigate the reasons for the surge; (iii) identify the injury impact, both on the local industry and other related sectors; and (iv) determine causality mainly through the elimination of other potential contributors to the injury indicators.

The various FAO case studies are informed primarily by examining the trends in the imports of some selected food commodities in a number of selected developing countries over the last one decade. The choice of the food commodities to be included in the case studies was influenced by the significance of the different commodities in the economies of the selected countries and the fact that the imports of those commodities in the selected countries have been increasing in recent times. For this reason, the case study in Kenya focuses on the imports of maize, sugar and dairy products (dry milk powder). The three commodities are key agricultural commodities in Kenya in terms of their significance in supporting food security and rural livelihoods in the country. Therefore, it is important that the extent and impact of the imports of these commodities on Kenya's economy are appropriately analyzed and well understood.

1.2 The study process

The study involved the identification of the import surges and the reasons thereof, with special focus on the understanding and documentation of the injury to the domestic economy, if any, including its causation and non-attribution. The study utilized both qualitative and quantitative survey methods.

1.2.1 Qualitative surveys

On the qualitative side, interviews were held with the various stakeholders to the import surges, including government officials, farmers and farmers' associations, importers/traders/food processors, research institutions and civil society/ Non-Governmental Organizations where feasible. Accordingly, the people/institutions mentioned hereafter were interviewed.

(i) In the case of the Kenya's dairy Industry, the Institutions/People Interviewed included the Kenya Cooperative Creameries Limited (KCC) General manager, a Director of Spin Knit Dairies Ltd ("Tuzo" Dairy Brand), Chairman and Sales manager for Githunguri Dairy Farmers Cooperative Society Limited (a farmers' cooperative society that is also involved in Dairy Processing), officials of Kenya Dairy Board, including the Managing Director, Director and Assistant Director of Livestock Development in Kenya, Head of Development Planning and Information Services Department in the Ministry of Livestock and Fisheries Development in Kenya and Managing Director of Eldoville Farm and Food Processors.

(ii) In the case of Kenya's Maize Industry, the People/ Institutions Interviewed included the Ministry of Agriculture officials, including the Permanent Secretary for the Ministry of Agriculture in Kenya, the officials of the National Cereals and Produce Board in Kenya (NCPB), including the NCPB Managing Director, the Chief Executive Officer for the Cereal Growers Association (CGA) of Kenya, and some participants at the Regional Grain Summit for Eastern and Southern Africa that was recently held in Nairobi, Kenya (11–13 October 2005).

(iii) In the case of Kenya's Sugar Industry, the People/ Institutions Interviewed included the Ministry of Agriculture officials, including the Permanent Secretary for the Ministry of Agriculture in Kenya, the officials of the Kenya Sugar Board in Kenya (KSB), including the KSB Acting Managing Director, and a number of Sugar Industry Stakeholders who attended the National Consultative Workshop that was organized under the auspices of Actionaid Kenya Country Program under the team leadership of Mr. Peter Kegode in Nairobi, Kenya, on 22nd August 2005.

(iv) Some general stakeholders to food import surges and some selected researchers were also interviewed, and these included: (a) a number of people who had attended a National Dissemination Workshop on the Assessment of the Effects of Economic Partnership Agreements (EPAs) that had been organized by the Kenya Institute of Public Policy Research and Analysis (KIPPRA) in Nairobi, Kenya, on 1st November 2005, under the Auspices of the Ministry of Trade and Industry through the Kenya-European Union Post-Lome Trade Programme (KEPLOTRADE); and (ii) senior officials of the Kenya Federation of Agricultural Producers (KENFAP).

1.2.2 Quantitative survey: focus on the types of data collected

On the quantitative side, efforts were made to (i) collect and analyze trade statistics for the selected commodities (i.e. products whose imports are under investigation), and (ii) to identify Government Policies and Measures that affect imports of both the products in question as well as the "like" and "competitive" products and how these policies have developed over time, particularly since 1995, when some of the Uruguay Round (UR) agreements started being implemented selectively, in order to be able to provide an assessment of how these measures, or changes thereof, might affect import trends.

The Government Policies and Measures that affect the imports of both the products in question as well as the "like" and "competitive" products are varied and include taxes (e.g. tariff measures and other taxes and duties), import licensing and other non-tariff barriers, import restrictions (e.g. seasonal import bans, tariff

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[1] 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 **A** divided by **B** and 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

[1] 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.

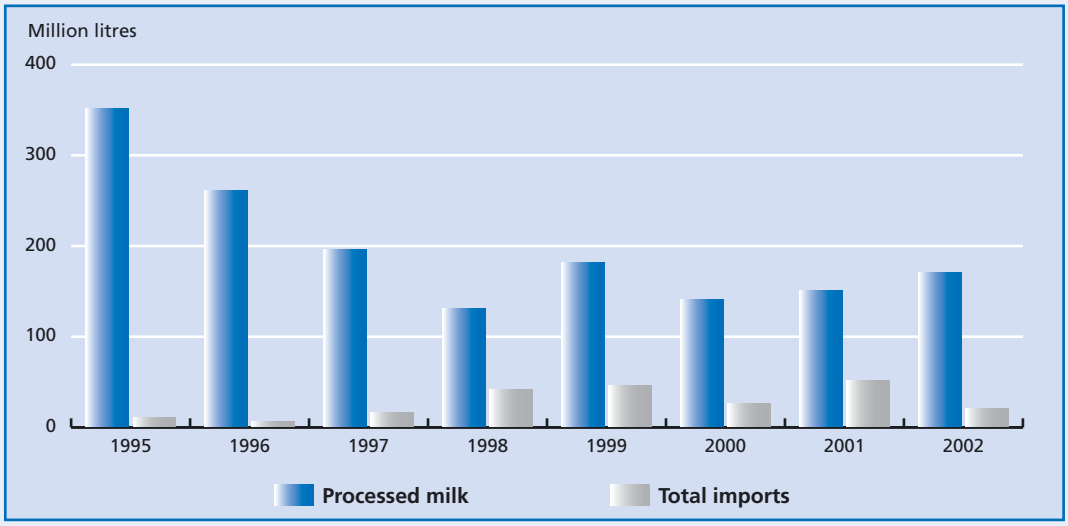
The outcome of any spillages of the imported humanitarian relief food and the diversion of the "transit foods" into the local market, coupled with trade flows through the unrecorded cross-border trade, is that significant volumes of unrecorded food imports enter the commercial marketing chain. Such volumes 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

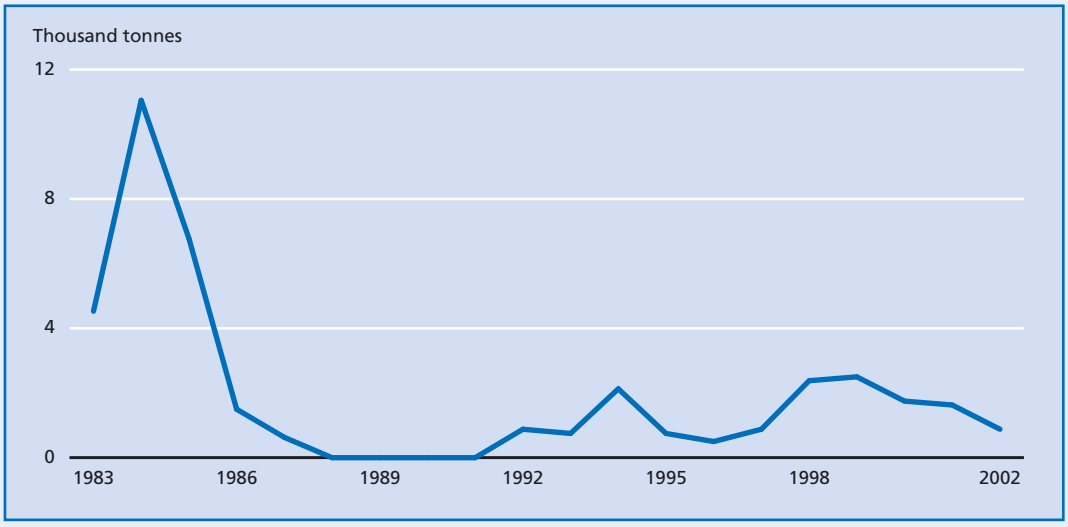
The focus of this study is on the imports of dry milk powders. There are two categories of dry milk powders, namely dry whole milk powder and dry skim milk powder. Dry milk powders are "substitutable products" with regard to raw milk because they can be used in the processing of many products that are 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.

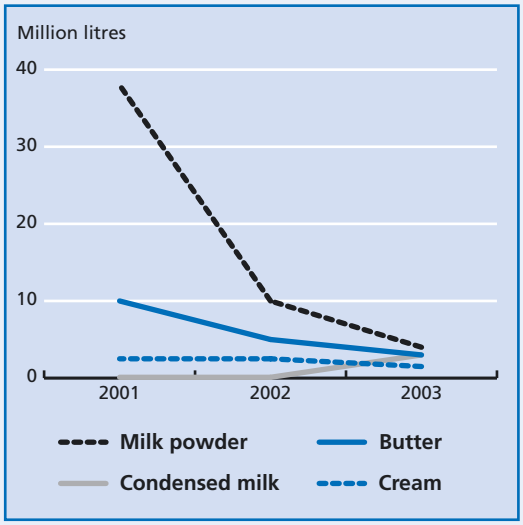
Figure D2 shows that there were substantial increases in the imports of dry milk powders in 1984, 1992, 1994, and from 1998 to 2001.

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 n 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.

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		

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 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.

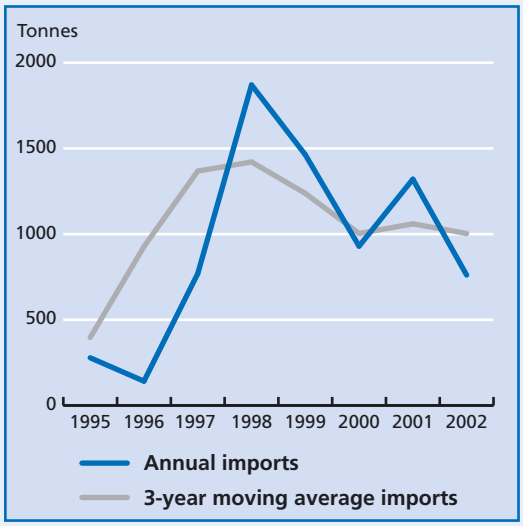
Figure D4 gives a graphical representation of the given year's imports of dry skim milk powder against the background of the previous three-years moving average of the imports of dry skim milk powder.

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

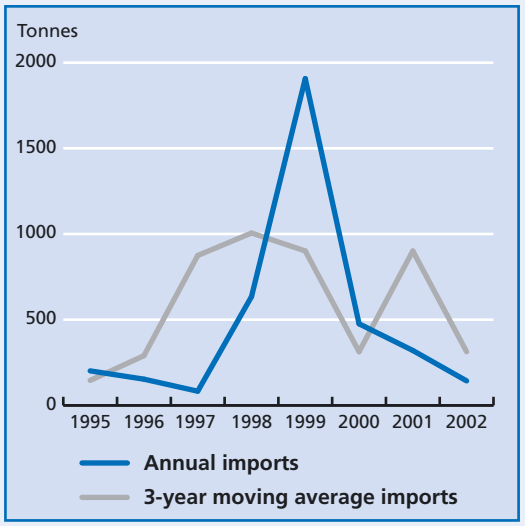
Table D4 presents the given year's imports of dry whole milk powder versus the previous three-years

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.

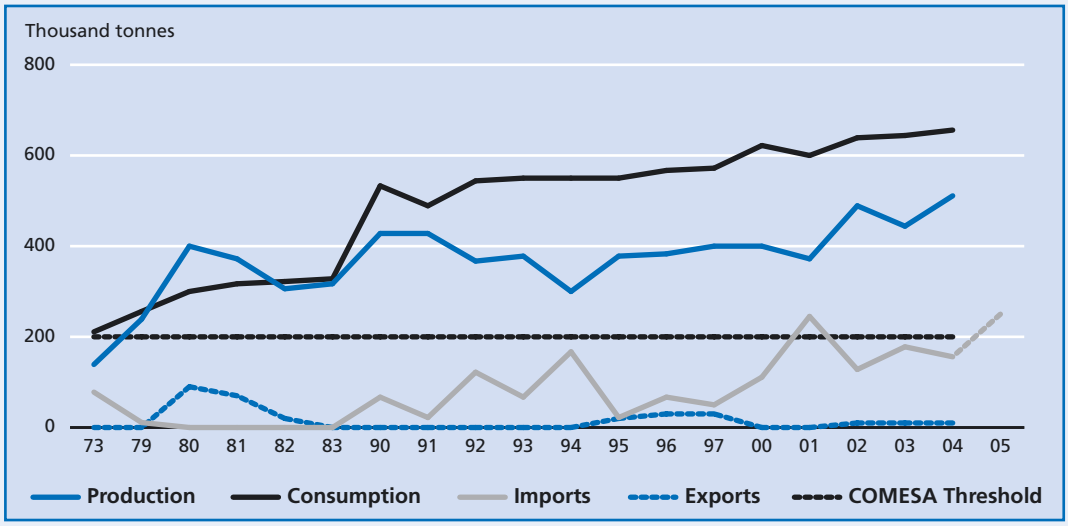
Figure S1 gives the trends in sugar production, imports, and consumption in relation to the COMESA quota threshold, including the imports and exports when applicable.

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.

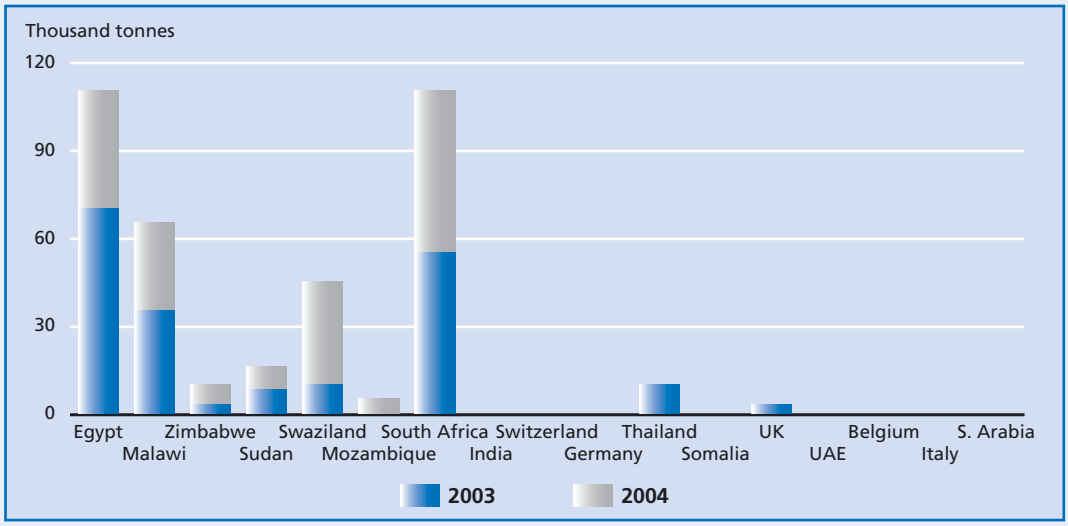
Figure S2 shows that most of Kenya's sugar imports originate from South Africa and the COMESA region (Egypt, Malawi, Swaziland and Sudan). The KSB/

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.

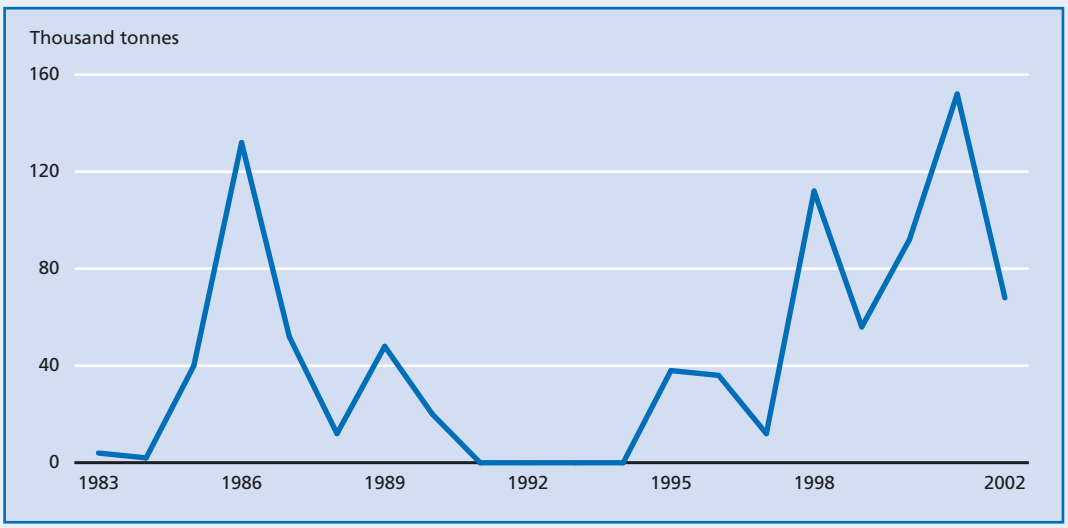
The total sugar imports, as reflected in Figure S1, include both white mill sugar for domestic consumption and refined white sugar for industrial use.

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.

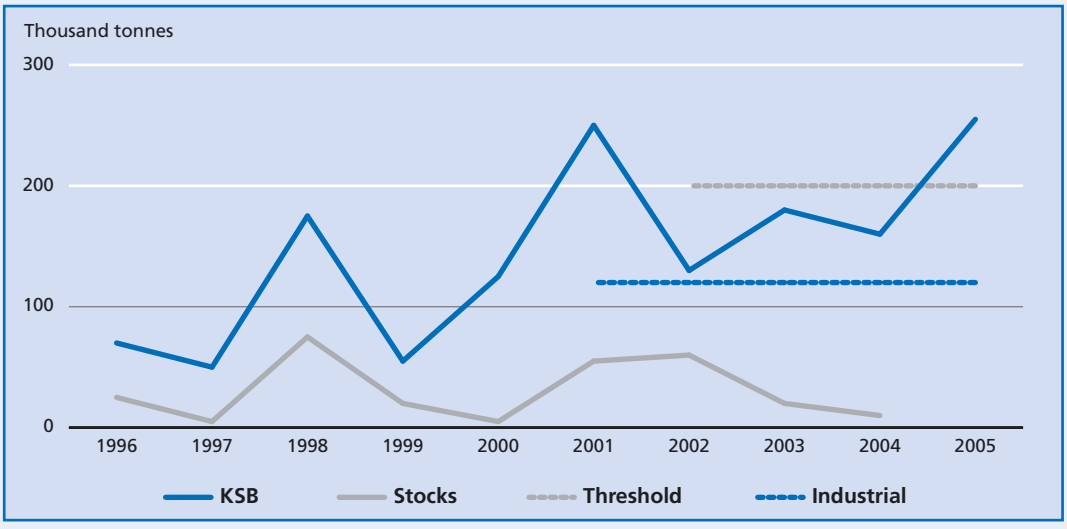
Table S1 presents the comparisons of the annual sugar import levels versus the three-years moving average import levels in a tabular form. The same information is presented graphically in Figure S5.

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.

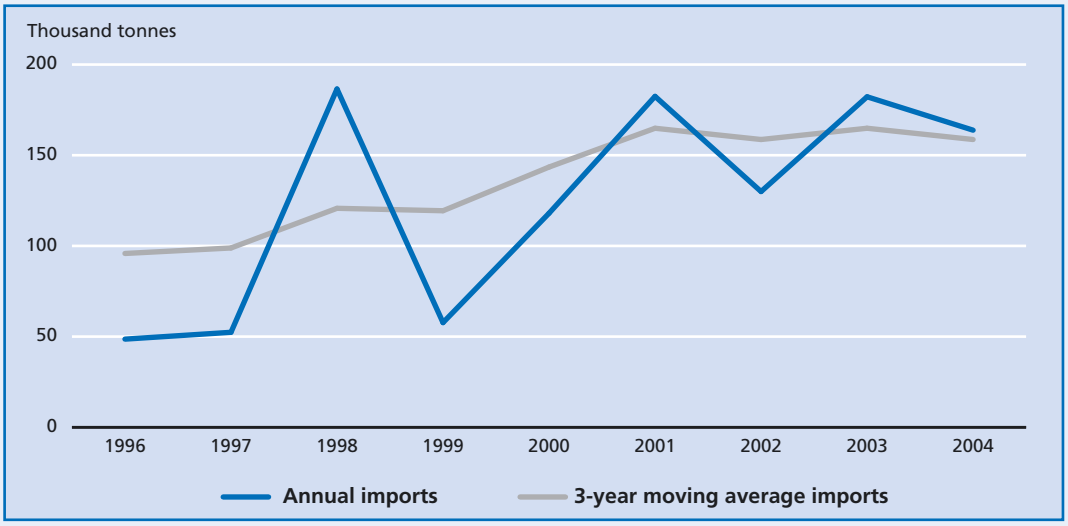
The sugar imports data, as presented in Table S1 and graphically in Figure S5, basically capture the official (recorded) sugar imports by the local traders and the manufacturing industry, which are basically commercial imports. An examination of the Kenya Sugar Board (KSB) and the Kenya Revenue Authority (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.

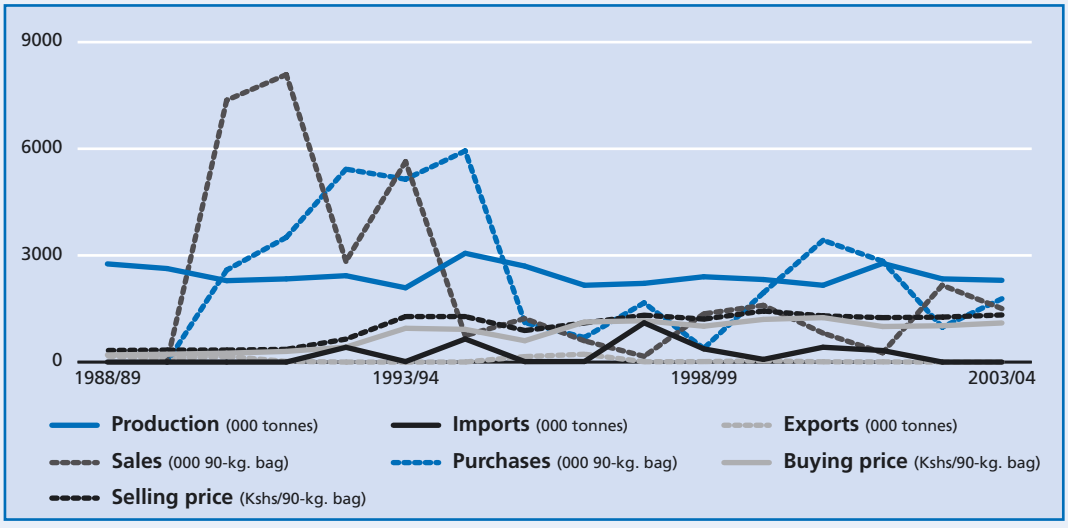
Figure M1 shows that maize imports in Kenya have steadily been increasing from an annual low of 2.9 percent to an annual high of 12 percent of domestic consumption since 1988. The figure suggests that Kenya's maize imports increase with the falling quantities of maize that are bought from domestic sources 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.

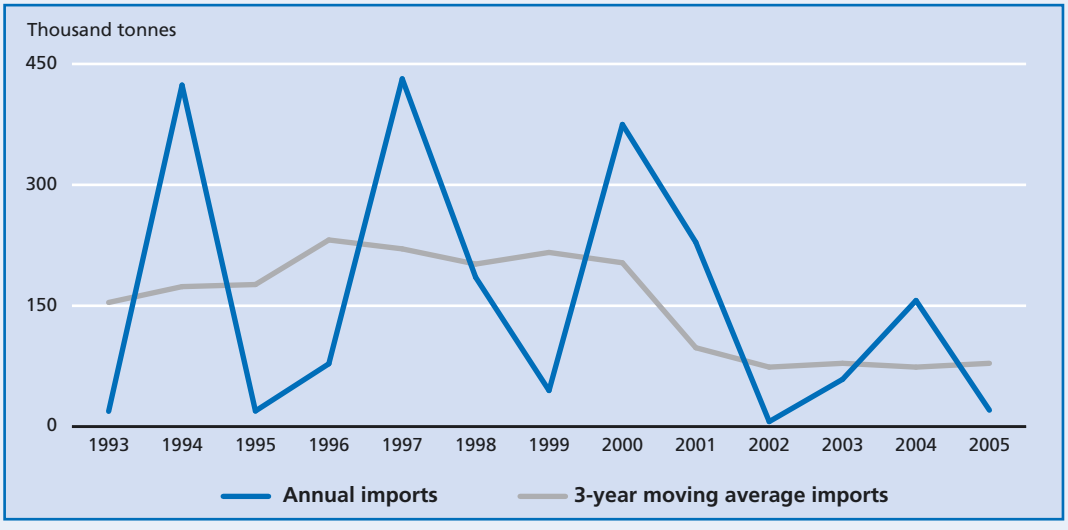
The maize imports data, as presented in Table M1 and graphically in Figure M2, includes both commercial imports by local traders and relief food imports by the World Food Programme (WFP). The available maize imports from the National Cereals and Produce Board (NCPB) were an aggregate of the two types 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.

The observed effects of the commodity imports on the domestic marketing systems are due to the fact that these marketing systems are characterized by oligopolistic tendencies, such that the importers appropriate to themselves any benefits accruing to the importation of cheaper commodities, while the flooding of the domestic market with the imported products actually denies the local farmers an outlet for their outputs, thus resulting in low producer prices.

3.2 Mapping the dairy sector

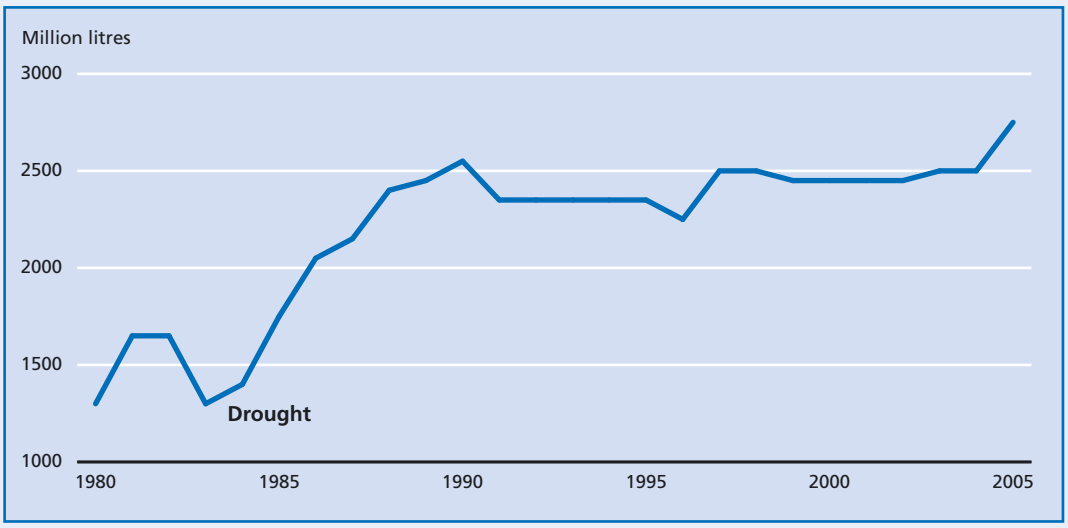
3.2.1 Product description and the country context

Official milk production statistics for Kenya are based on the estimated population of livestock numbers and their estimated milk yields. Therefore, the reliability of the milk production statistics is questionable, given that Kenya has not undertaken a serious livestock census over the last three decades. Nevertheless, the official milk production statistics do provide a useful guide when one needs to evaluate the trends in annual milk production levels. Figure D6 gives the trends in milk production in Kenya since the 1980s.

Based on the official statistics, the overall annual milk production levels usually exceed the local demand for milk. However, seasonal milk supply shortages do occur during the dry periods, and such shortages usually force the dairy processors to seek out and use dry milk powders in order to be able to even out their supply of milk products. The use of dry milk powders is, therefore, expected to increase during the dry spell (January to April) when fresh milk intakes are low, and to go down during the flush period (from July to December). In the absence of domestic stocks of dry milk powders, importation of dry milk powders to meet domestic needs during the dry period is inevitable.

Kenya's dairy imports over the last one decade have exhibited an inverse relationship with the trends in the local production of processed dairy products (see Figure D1). Increased levels of dairy imports in Kenya have usually occurred during and soon after drought periods in the country. However, there is some evidence that the increased levels of dry milk powder imports in Kenya since 1995 were also being fuelled by the mismanagement problems at the Kenya Cooperative Creameries Limited (KCC). The KCC was the only dairy processing firm in Kenya that had processing facilities to convert raw liquid

FIGURE D6
Trends in Milk production in Kenya, 1980-2005



Source: Karanja, A. M. (2003).

milk into dry milk powders before the organization collapsed in 1997. The KCC had remained the major dairy processor in the country until 1992 when the dairy industry was liberalized in May 1992.

The government's initiatives to revive the KCC since 2000 were successful by late 2003, and the "New KCC" was able to cope with all the farmers' deliveries of raw milk to its factories following the bumper milk production levels in Kenya in 2004. With the revival of the KCC, the dairy sector in Kenya is once again characterized by a significant degree of competition, with Brookside Dairies (BD) and Spin Knit Dairies (SKD) as the main competitors for the KCC. The KCC and the BD almost have equal shares in the fresh and long-life (UHT) milk and butter markets, with the SKD being in the 3rd place. The KCC has 100 percent monopoly in the processing and supply of locally produced dry milk powders.

According to the management of the New KCC, they still do not have an instantizer that would be needed to process and produce "refined" dry milk powders that are needed for the manufacture of milk based baby foods. Hence the main manufacturer of baby foods, i.e. Nestle, still has to import that category of dry milk powders.

Production costs relative to the world market prices for the various products produced within an industry determine the competitiveness of the industry. The milk production cost in Kenya varies with the type of production system, depending on the levels of purchased inputs and grazing systems. A survey carried out by the Tegemeo Institute in Kenya in year 2002 (Karanja, A. M., 2003) shows that the milk production cost varies from KShs 10.50 to KShs 14.95 per litre, as indicated in Table D5.

Based on the data given in Table D5, the average milk production cost in Kenya is about KShs 12.65 per litre or kg (approximately US cents 17 per litre or kg, when the exchange rate is taken at an average of KShs 75 per US dollar).

Australia, Argentina and New Zealand (members of the Cairns Group of Nations) provide the benchmark for the lowest and unsubsidized milk producer prices in the world. The producer prices in these three nations in 1999/2000 were as low as 15-20 US cents per litre, as indicated in Table D6. The other members of the Cairns Group of Nations, which represent the major farming countries that do not subsidize agricultural production, include Brazil, Australia, New Zealand, South Africa, Argentina, Bolivia, Colombia, Costa Rica, Fiji, Guatemala, Indonesia, Paraguay, Philippines, Thailand and Uruguay.

At the current milk market prices, it is estimated that producer prices of less than USD 0.20 (Ksh15.60) per litre would be the dividing line between those countries that can export dairy products without the use of subsidies and those which cannot (Griffin, 1999; FAO, 2002). Therefore, with the average producer prices of from Kshs 11 to KShs 15 per litre prevailing in most parts of Kenya in 2002, the country can be placed in the second low-cost category as per Table D6 classification. The preceding analyses show that Kenya is fairly competitive in dairy production and thus has the potential to compete in international dairy trade.

Figure D7 gives a schematic view of the milk marketing structure in Kenya.

In Figure D7, the "informal" sector represents milk sales in the raw/unprocessed form, while the "formal" sector represents the amount of milk that goes for processing by the local dairy processing facilities.

TABLE D5
Summary of milk production cost in KShs per litre or Kg

Description	Zero grazing	Small scale open grazing	Large scale open grazing
Variable costs	8.60 (57 percent)	6.20 (59 percent)	8.50 (68 percent)
Labour cost	4.90 (33 percent)	3.10 (29 percent)	2.70 (21 percent)
Fixed cost	1.45 (10 percent)	1.20 (11 percent)	1.30 (10 percent)
Total cost	14.95	10.50	12.50

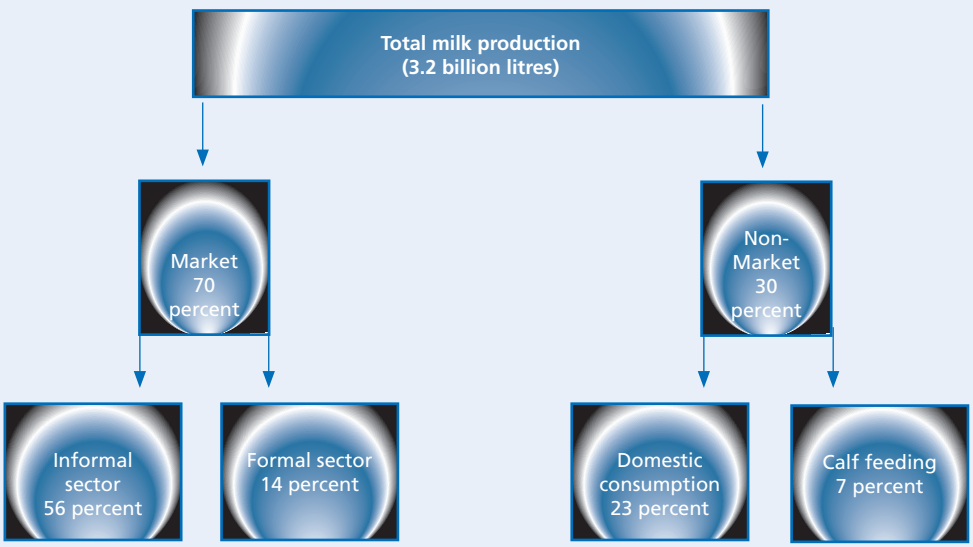
Source: Karanja, A. M. (2003), Tegemeo Institute/ Egerton University, Kenya.

TABLE D6
Estimated milk producer prices among the major producer countries, 1999/2000 season in US cents per litre or kg

Producer Price range US cents/kg	Country(s)
(Ksh 47.60-54.60)	Japan
(Ksh 39.80-46.80)	Switzerland
(Ksh 35.90-39)	El Salvador
(Ksh 32-35.10)	Jordan, Norway
(Ksh 28.10-31.20)	Guatemala, Pakistan, Sudan
31-35 (Ksh 24.20-27.30)	Austria, Canada, Colombia, France, Germany, Irish Republic, Israel, Netherlands, Panama, Portugal, UK, Venezuela
26-30 (Ksh 20.30-23.40)	Bangladesh, Bosnia, Costa Rica, Croatia, Czech Republic, Dominican Republic, Ethiopia, Hungary, Mexico, Namibia, Nepal, Tanzania, Thailand, USA, Viet Nam
21-25 (Ksh 16.40-19.50)	Botswana, Bulgaria, China, India, Nigeria, Paraguay, Peru, Slovakia
16-20 (Ksh 12.50-15.60)	Chile, Estonia, Latvia, Malawi, Moldova, Poland, Romania, Russian federation, South Africa, Uganda, Zimbabwe, KENYA
10-15 (Ksh 7.80 -11.70)	Argentina, Australia, Brazil, Lithuania, New Zealand, Uruguay

Source: Mbwika, *et al.* 2005

FIGURE D7
Trends in domestic production of processed dairy products in Kenya, 1986-2004



3.2.2 Dairy products and their importance to Kenya's economy

The dairy sub-sector in Kenya is primarily smallholder based. There are an estimated 600 000 small-scale dairy farmers in Kenya, who account for over 70 percent of the total milk production in the country. The small-scale dairy producers are usually organized around their dairy cooperative societies. There are numerous dairy farmers cooperative societies (DFCSs) in the major milk producing areas of Kenya, and milk is the main source of their livelihoods—see Box 1 on the case study of one of such DFCSs, which is given as an appendix to this report.

The dairy sub-sector in Kenya makes a substantial contribution to the country's GDP. Of the estimated 24 percent contribution to Kenya's GDP by the agricultural sector, about 50 percent is from the livestock sub-sector which is dominated by the dairy component (MOLFD Annual Reports, Various Years). Of the total amount of milk produced in Kenya, only about 70 percent is estimated to be marketed. The rest is consumed on-farm, including what is fed to calves.

The value of dairy production in Kenya was estimated at Kshs 23.1 billion in 1995, equivalent to 14 percent of the total value of agricultural production in the country by then. By 2000, the value of milk production in the country had risen to Kshs 35.2 billion, equivalent to 25 percent of the gross agricultural output by then (Karanja, 2003), and the value has continued to rise steadily since then.

Given the concern about the credibility of the official statistics on milk production in Kenya, the trends in the volume of processed milk from local sources in Kenya can be used as a proxy for the availability of locally produced dairy products. These trends also reflect indirectly the shortfalls in domestic dairy production that have to be met through imports. Figure D8 shows the trends in the volume of processed milk in Kenya between 1986 and 2004.

Figure D8 shows that there was a declining trend of local processing of dairy products in Kenya between 1995 and 2002. This factor is also evident from Figure D1, which reflects the corresponding increases in dairy imports in Kenya during the period under analysis.

3.2.3 The cost of imported dry milk powders and the price-quantity relationships in Kenya

In Kenya, droughts and other adverse weather conditions partly explain the trends in dairy production, imports and exports. These trends, in turn, influence the level of prices for dairy products in the domestic market. However, the structure and the efficiency of the emerging dairy processing firms in the country since 1992 also appear to be responsible for these trends.

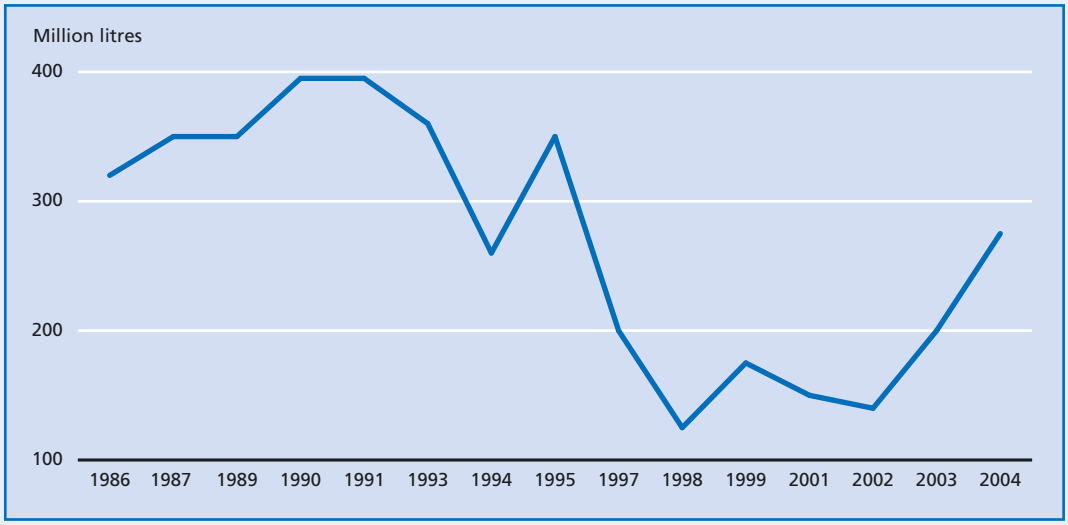
Figure D9 illustrates the relationship between the quantities and the c.i.f. prices of imported dry whole milk powder in Kenya (c.i.f. Mombasa data) for the 1995-2002 period.

Figure D10 illustrates the relationship between the quantities and the c.i.f prices of imported dry skim milk powder in Kenya (c.i.f Mombasa data) for the 1995-2002 period.

From Figures D9 and D10, it is obvious that the prices of imported dry milk powders have remained relatively stable over the last ten years, yet the quantities of the dry milk powders imported into Kenya during the same period have fluctuated significantly. This suggests that the decisions to import dry milk powders are not primarily based on the prices of these powders. For example, the dry milk powder imports rose drastically between 1997 and 2001 while the c.i.f price more or less remained unchanged over the same period.

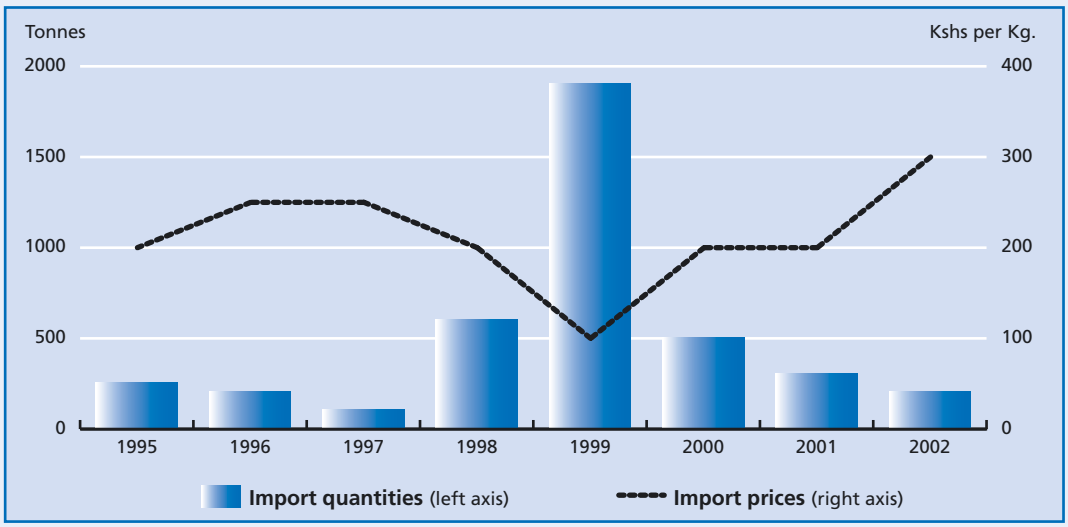
An evaluation of the profitability of the importation and the reconstitution of dry milk powder into liquid milk for sale in Kenya shows that it is possible to sell the reconstituted dairy products at prices that would be about 20 percent lower than the domestic market prices for the liquid milk—see Appendix Note 2. In that evaluation, the c.i.f. Mombasa (Kenya) price of dry milk powder is taken at a relatively high level of USD 2 400 per mt, even though the said price usually fluctuates from a low of USD 2 000 to a high of USD 2 500 per mt in most cases. However, whenever the need to reconstitute dry milk powders into liquid milk arises, the local dairy processors do not usually price the reconstituted liquid milk any lower than the price of the fresh (pasteurized) liquid milk that is processed from the domestically produced raw milk. Therefore, the importation of dry milk powder for

FIGURE D8
Trends in domestic production of processed dairy products in Kenya, 1986-2004



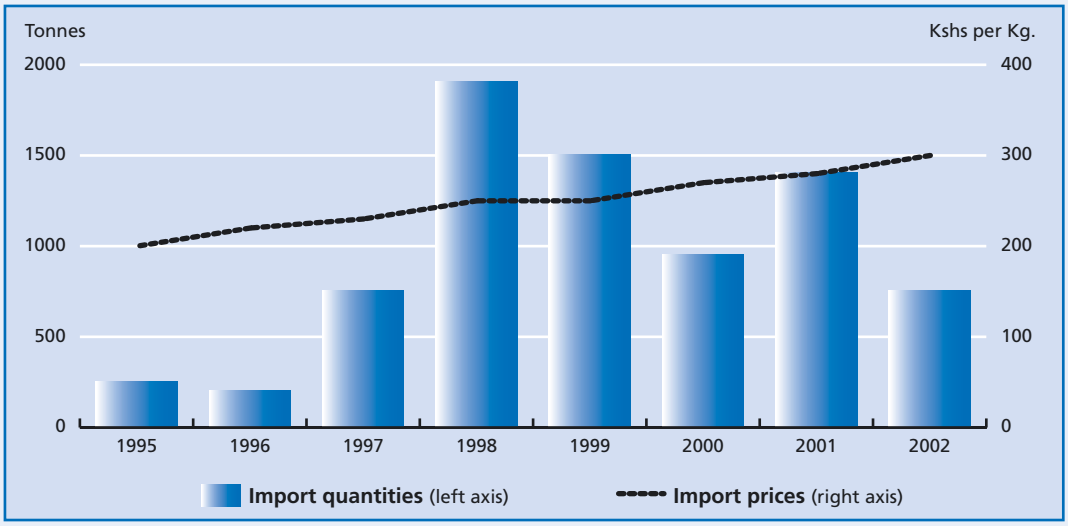
Source: Graph based on Statistics from the Kenya Dairy Board Records.

FIGURE D9
Relationship between Kenya's imports of dried whole milk powder and its c.i.f prices, 1995-2002



Source: Kenya Dairy Board (KDB)/Kenya Revenue Authority (KRA) Records.

FIGURE D10
Relationship between Kenya's imports of dried skim milk powder and its c.i.f. prices, 1995-2002



Source: Kenya Dairy Board (KDB)/Kenya Revenue Authority (KRA) Records.

reconstitution into liquid milk for sale in Kenya can be a very attractive enterprise.

3.3 Mapping the Sugar Sector

3.3.1 Product Description and the Country Context

Sugar production in Kenya occurs in western Kenya (Nyanza and Western provinces), but sugar consumption occurs in all parts of the country. The six (6) operational sugar factories in 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.

Economic evaluations indicate that Kenya's ex-factory cost of sugar is 44 percent above the world market price for raw sugar. Hence Kenya is not a competitive sugar producer at both regional and international levels. Within the COMESA (Common Market for Eastern and Southern Africa) region, countries like Malawi, Egypt and Sudan are far more cost efficient producers of sugar than Kenya. In fact, Malawi is one of the least cost producers of sugar in the world at USD 0.05 per pound, compared to a world average of USD 0.0 6 per pound (Mbwika, et al 2005). Therefore, Kenya's sugar industry faces a major threat from both the COMESA and the rest of the world should sugar imports be completely liberalized.

Table S2 gives a comparison of the unit sugar production costs for some selected countries in the world, to give an idea of Kenya's competitive position in the world's sugar market.

Table S3 compares the Kenyan sugar market price with those for the EU Sugar Protocol, the EU Special Preferential Arrangements on Sugar (SPS), US-TRQ, Malawi, Swaziland, Brazil, Sudan, Zambia, and Trinidad and Tobago markets and the World Market, based on the latest sugar market prices (2004/2005 averages).

The figures presented in Table S3 clearly show that the market price for sugar in Kenya is relatively much higher than those for the other given markets, except for the Trinidad & Tobago market. Hence Kenya and the Trinidad and Tobago are high cost producers of sugar and fall into the category of the countries that are vulnerable to sugar imports and are thus attractive destinations for global sugar exports.

The sugar marketing chain is two-pronged: there is the channel that describes the route taken by

the imported sugar, and that which describes the route taken by the domestically produced sugar, as summarized below:

(i) The channel for the Domestically Produced Sugar is as follows:
Sugarcane Producer---Millers---Wholesaler/ Distributor---Retailer---Consumer

(ii) The channel for the Imported Sugar is as follows:
Importer/Wholesaler/Distributor---Retailer---Consumer*
* this could be either an individual/household consumer or industrial user.

In the above representations of the sugar marketing chains, the wholesaler/distributor and retailer in both channels are likely to be the same entities, but the consumer in the "imports" channel could be an individual or industrial user.

3.3.2 Sugar and its importance to Kenya's economy

The sugar industry in Kenya is based on smallholder sugarcane production and the small-scale sugarcane growers account for about 88 percent of the area of land under sugarcane production in the country. Production occurs in the Western and Nyanza provinces of Kenya (Kegode, 2005). The government has a high stake in the industry. Of the six (6) operational sugar milling companies in Kenya, one is fully privately owned (West Kenya Sugar Company), four are wholly government owned, and one (Mumias Sugar Company) was privatized in 2001. However, the government still retained a majority shareholding in the Mumias Sugar Company even after the privatization exercise. For this reason, the government is heavily involved in the formulation of the sugar policy and also in the management of the sugar industry in the country.

TABLE S2
Approximate cost of sugar production in selected countries (cents/lb)

Country	USD per pound
EU	0.25
India	0.09
Zambia	0.055
Thailand/ Malawi	0.05
Brazil	0.04
Kenya	0.17*
World market price, white sugar	0.08
World market price, raw sugar	0.06

*Based on 2003 ex-factory price of mill white sugar for Nzoia Sugar Company, Kenya
Source: Mbwika, *et al.* (2005)

TABLE S3
Comparative average sugar prices in different markets in 2004/2005

Market	Price in USD per tonne	Price in US cents per Kg
EU Sugar Protocol	523.7	52.4
EU SPS	448.0	44.8
US TRQ	353.0	35.3
World Market	250.0	25.0
Malawi	230.0	23.0
Swaziland	265.5	26.6
Kenya	850.0	85.0
Brazil	200.0	20.0
Sudan	345.0	34.5
Zambia	275.0	27.5
Trinidad & Tobago	1051.6	105.2

According to the Kenya Sugar Board, nearly 6 million people in Kenya derive their livelihoods from the country's sugar industry, either directly through sugarcane production, sugar manufacturing and distributive activities, or indirectly through the allied economic activities. The most important and direct contributions of the sugar industry in Kenya to the country's economy relate to farmer empowerment, rural employment and the revenue for local and central authorities. The provision of social infrastructure by the sugar industry is a strong component of the corporate social responsibility of the sugar millers in Kenya.

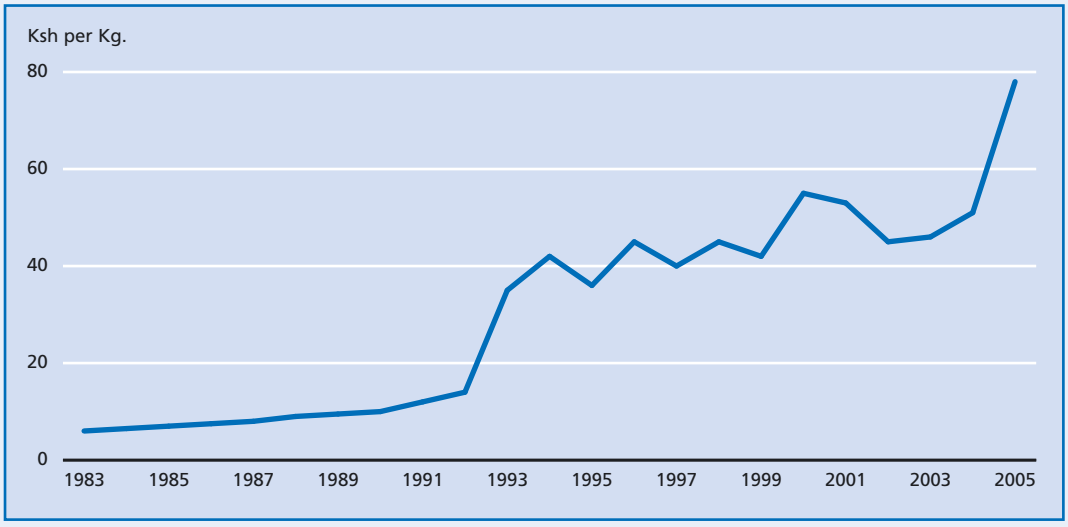
The sugar milling factories and the sugarcane plantations owned by the factories have employed between 43 000 and 75 000 people in Kenya over the past 10 years. The industry data show that employment and wages in the sugar sub-sector suffer whenever the sugar industry contracts due to external shocks. The sugarcane sub-sector also contributes significantly to the revenue of both the local authorities and the central government. For example, the sugar factories paid out KShs. 412 million in the form of "PAYE" (Pay-As-You-Earn) tax to the central government, which is related to direct employment in the sector.

The sub-sector also contributes significantly to the government revenue in the form of value added tax (VAT), sugar development levy (SDL) and local authorities levies (cess). In the year 2004, total VAT remittances amounted to KShs. 2.5 billion, up from KShs. 2.2 billion in 2003. Corporate tax to the central government amounted to KShs. 530 million in 2004, up from KShs. 61.5 million in 2003. Payments to the SDL amounted to KShs. 1.1 billion in 2004, while excise duties stood at KShs. 116 million in the same year. Hence the government is a major beneficiary of the revenue streams from the sugar sub-sector (Kegode, 2005).

3.3.3 The cost of imported sugar and the behaviour of the sugar consumer prices in Kenya

Based on the 2004 prices, the imported sugar landed in Kenya at KShs. 23.30 per kg, c.i.f. Mombasa. The importers, after paying relevant duties, sold the sugar to wholesalers at KShs. 48 per kg, and the consumer ultimately paid between KShs. 63 and KShs. 76 per kg, which is the same price as the one pertaining to the sugar produced domestically. Hence the consumers do not benefit from the relatively cheaper imported sugar: the importers appropriate approximately a 45-49 percent marketing margin (Kegode, 2005). This appears to be the reason why there has been an increasing trend in the nominal consumer prices of sugar in the face of increasing

FIGURE S6
Average annual prices of sugar in Kenya, 1983-2005



trend in sugar imports since the beginning of the 1990s. Figure S6 gives the trends in the retail sugar prices in Kenya over the 1983 – 2004 period.

Figure S6 shows that the sugar retail prices in Kenya have increased relatively fast since the beginning of the 1990s. This behaviour of prices is consistent with a situation in which there has been an increasing demand for sugar in the face of declining domestic sugar production. Since the exchange rate in Kenya has exhibited some depreciation over the last 10 years, this may also help to explain why the nominal retail price of sugar in Kenya has been increasing even in the face of rising sugar imports.

3.4 Mapping the maize sector

3.4.1 Product description and the country context

Kenya produces the white maize varieties, and these are the varieties that Kenyans consume, either as whole grain maize or as milled maize flour. Ordinarily, Kenyans would deject the consumption of the yellow types of maize varieties that are grown in the United States of America because they associate such varieties with the inputs in the manufacturing of animal feeds. As such, the Kenyan white maize is treated a product that has no close substitute in importation as far as the Kenyan producers and consumers are concerned. The imported white maize grain is thus a "like product" in relation to the domestically produced white maize grain.

Maize marketing in Kenya operates under a liberalized system whereby the marketing channel invariably links the farmers to processors of maize flour and other maize products, including animal feeds. Under that liberalized marketing regime, maize reaches the consumer through various channels whose structure depends on the location of the particular consumer. Figure M3 gives a schematic view of the maize marketing value chain in Kenya.

3.4.2 Maize and its importance to Kenya's economy

Maize is one of the key food crops that are produced in Kenya. It is a major staple food crop in the country that is closely associated with national food security. The main focus of the food policy in Kenya has been to encourage self-sufficiency in food production in the field of the main food crops (maize, wheat and rice) as a means of achieving food security (Draft KRDS, MOARD 2001). About 90 percent of Kenya's population depends on maize as a source of food. As a staple food commodity in Kenya, maize is an important source of calories for a large proportion of the country's population in both rural and urban areas (Nyangito and Nyameino, 2002). The other key food crops are rice, wheat, sorghum, potatoes, cassava, beans, and vegetables.

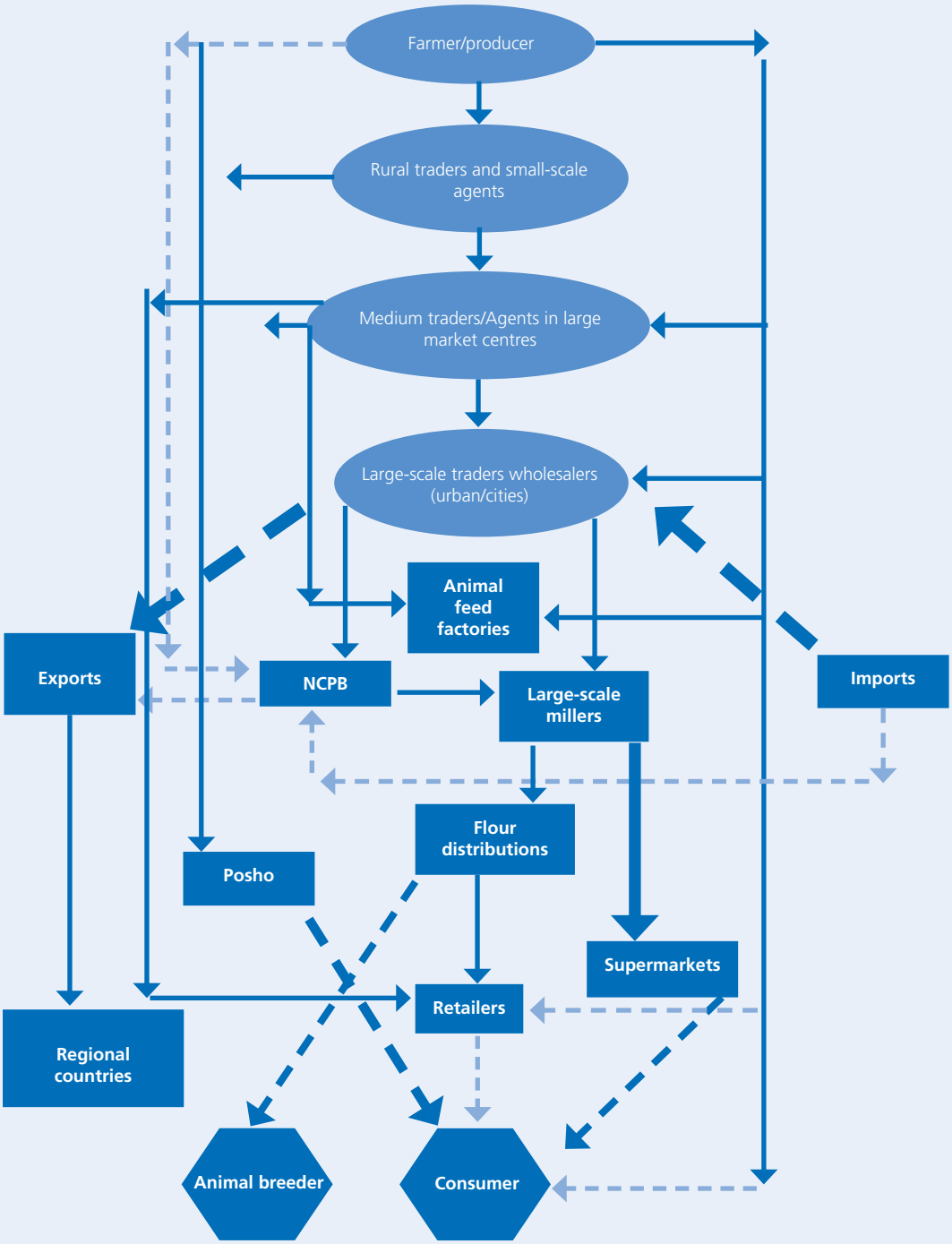
Production of maize in Kenya contributes about 28 percent to the gross farm output by the small-scale farmers in the country, which is a significant proportion of the gross farm output in the country, given that over 70 percent of the Kenya's total agricultural output is from the smallholder farm sector. (Nyangito and Nyameino, 2001; Jayne, *et al.* 2005).

3.4.3 The cost of imported maize and the maize price - quantity relationships in Kenya

White maize grain is the type of maize grain that the Kenyans consume. Its most competitive source for imports is South Africa. Even though not a preferred product for consumption by the Kenyans, the yellow maize grain, if necessary, could be obtained most competitively from the United States of America (USA).

If Kenya were to import yellow maize from the USA, an evaluation shows that the cost of yellow maize from the USA landed at Nairobi, the main centre for the animal feeds manufacturing in Kenya, would be much higher than the cost of locally sourced white maize landed in Nairobi. The evaluation shows that a bag of maize from the USA landed in Nairobi would cost KShs 1 845.38 as opposed to KShs 1 436.00 for the domestically sourced maize landed in Nairobi for the period under analysis—see Appendix Table M2. If Kenya were to import white maize from South Africa, an evaluation shows that the cost of the South African white maize landed at Nairobi, the main consumer centre in Kenya, is much higher than the cost of the locally sourced white maize landed in Nairobi—see Appendix Figure M3. Therefore, Kenya is better off sourcing maize for processing into flour

FIGURE M3
The structure (value chain) of maize marketing in Kenya



NOTE: "Posho" in the figure refers to the maize flour product normally hat is processed using the hammer mills.
Source: Nyameino, *et al.* (2003).

and the manufacturing of animal feeds from domestic sources.

The above evaluations of the cost of imported maize in Kenya shows that maize imports by Kenya would be justified only when there are serious domestic production shortfalls. As a matter of fact, the maize production cost structure in Kenya is such that even the maize export parity price for Kenya does not favour maize exports from the country. The analysis of the Kenyan maize landed at the port of exit (f.o.b. Mombasa price for export purposes) shows that Kenya would be competitive only if the domestic production cost structure was such that the cost of a 90-kg bag of maize is below KShs 900—see Appendix Table M3 data.

The average national maize producer prices paid to the farmers by the NCPB generally reflect the farm-gate prices for maize in the main producing zones. Similarly, the average national NCPB wholesale maize prices generally reflect the movements in the consumer prices for maize. Figure M4 gives the general movements of the national average monthly NCPB Maize selling prices on an annual basis for the 1998–2005 period.

Figure M4 gives the average monthly price fluctuations for five crop-season years as follows:

(i) 1998-1999 period, with the annual average price for this period being KShs. 1 087.75 per 90-kg bag;
(ii) 1999-2000 period, with the annual average price for this period being KShs. 1 372.08 per 90-kg bag;
(iii) 2000-2001 period, with the annual average price for this period being KShs. 1 281.00 per 90-kg bag;
(iv) 2001-2002 period, with the annual average price for this period being KShs. 783.01 per 90-kg bag;
(v) 2002-2003 period, with the annual average price for this period being KShs. 1 049.08 per 90-kg bag;
(vi) 2003-2004 period, with the annual average price for this period being KShs. 1 358.27 per 90-kg bag;
(vii) 2004-2005 period, with the annual average price for this period being KShs. 1 481.70 per 90-kg bag.

The presentations of the graphs in Figure M4 may appear to be complex, but these were necessary to illustrate monthly price fluctuations within a year. However, the different colour charts should help to make it easy to trace these price fluctuations.

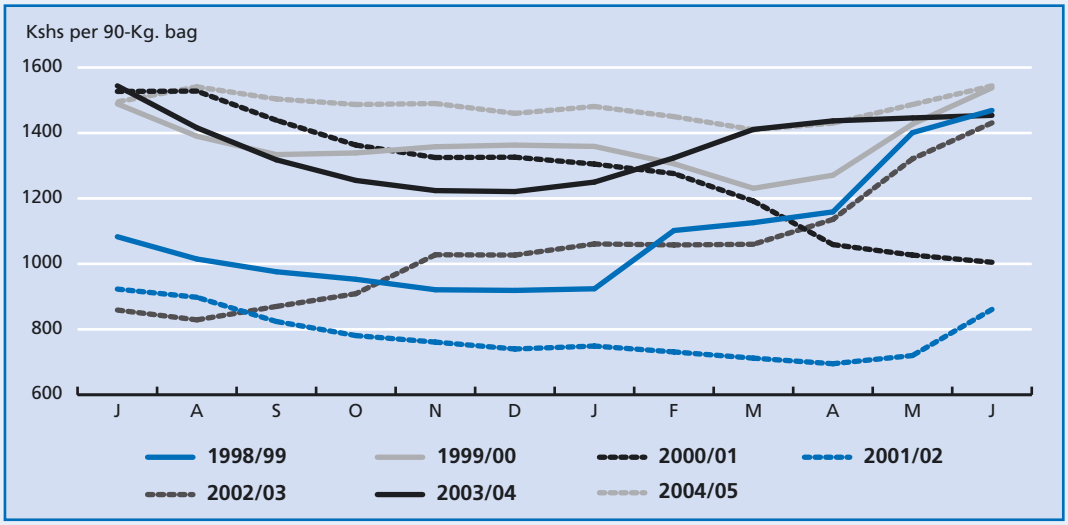
Figure M4 shows that the monthly wholesale (hence consumer) maize prices do fluctuate significantly within a year. The prices are relatively high between April and September (reflecting the main maize growing period and before the maize harvesting period starts), and relatively low between October and January (reflecting the main maize harvesting period).

The 2000/2001 period exhibits some unusual price movements, which are characterized by declining prices between July 2000 and June 2001. This period coincides with the period when the in-country maize stocks increased significantly due to late arrivals of imported maize. On the whole, the average annual producer price of maize fluctuated between a low of KShs 783.01 per 90-kg bag during the 2001/02 period and a high of KShs 1481.70 per 90-kg bag during the 2004/05 period. The average price for the period 2001/02 clearly reflects what impact import surges can have on the domestic economy in terms of low producer prices. The period 2004/05 in Kenya reflects a period of drought, and the high producer maize price during that period is thus expected.

Figure M5 gives the trends in producer and consumer prices of maize over the 1996 – 2005 period, based on the NCPB buying and selling maize prices.

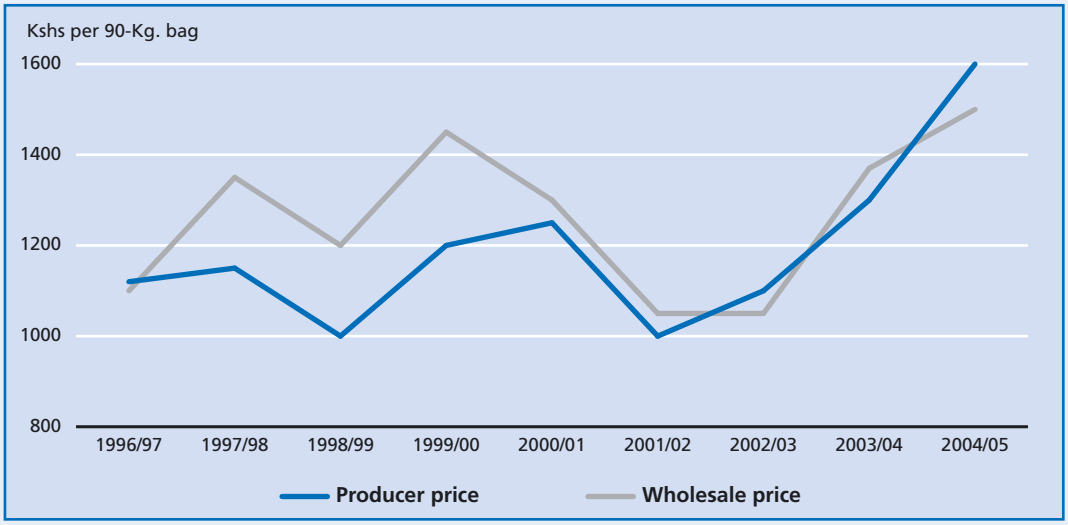
In Kenya, the wholesale price charged by the NCPB is taken as the market influencing maize consumer price, while the price paid to farmers by the NCPB is taken as the market influencing producer price. These price data are presented graphically in Figure M5. The figure shows that there are significant annual fluctuations in these prices: for the study period, price spikes occurred between 1997/1998 and 1998/1999, and between 1999/2000 and 2001/2002 periods. These are the periods when Kenya had significant shortfalls in domestic maize production and had to make maize imports to meet local demand. Due to government influence in the operations of the NCPB, the NCPB is sometimes forced to dispose of its maize stocks at prices lower than the purchase (i.e. producer) prices.

FIGURE M4
Trends in NCPB maize selling prices in Kenya, 1998/99-2004/05



Source: Charts based on data from the National Cereals and Produce Board (NCPB) records, Kenya

FIGURE M5
Trends in producer and consumer (NCB wholesale) maize prices in Kenya, 1998/99-2004/05



Source: Charts based on data from the National Cereals and Produce Board (NCPB) records, Kenya.

4. INJURY ANALYSIS: THE INJURY INDICATORS

4.1 Dairy sector

Dry milk powders are "substitutable products" in relation to raw milk since they can be used in the processing of many products that are normally processed from raw milk. As such, increased levels of imported dry milk powders ultimately affect farm-gate or producer prices of raw milk. This is because the increased imports of dry milk powders by the local processing firms that would have constituted the market for the raw milk that is produced locally certainly denies the local raw milk producers a market for their output. Therefore, any surges in the imports of dry milk powders may be expected to affect the domestic dairy industry in two ways: (i) impact on the farm-gate or producer prices of raw milk, and (ii) impact on availability of market outlets for locally produced raw milk.

The period 1985-2001 in Kenya was characterized by a sharp declining trend in the local processing of dairy products and a concomitant increasing trend in the imports of dairy products. Figure 11 demonstrates how the producer prices for the locally produced raw milk in Kenya were behaving during that period.

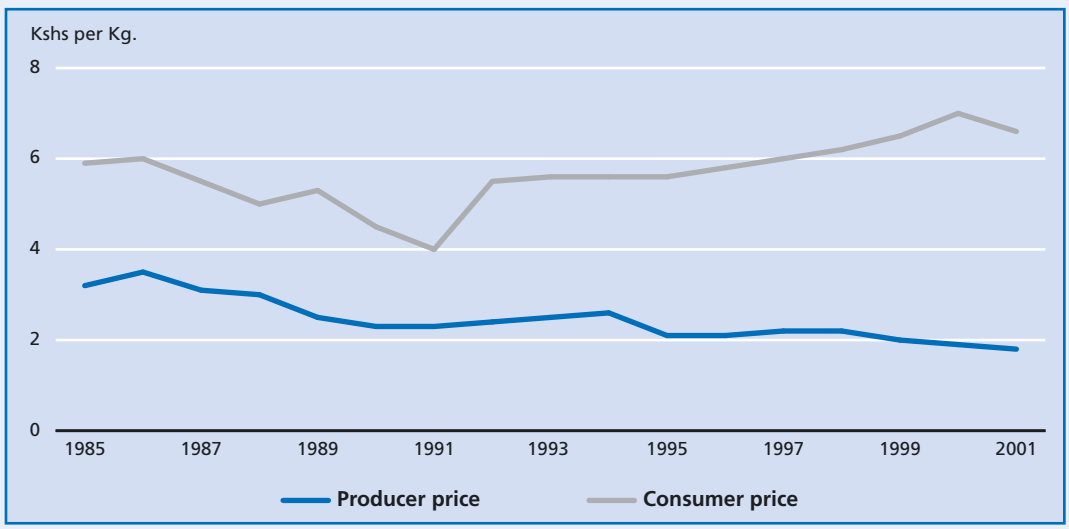
Figure D11 shows that the milk producer prices actually remained relatively depressed during the same period, even though the consumer prices for the processed dairy products were actually rising during that period. Consequently, the producer's share in the retail price of the packaged/pasteurized "fresh liquid milk" actually declined over the 1985-2001 period, as shown in Figure D12.

Hence the surges in the imports of dry milk powders in Kenya that have occurred since 1986 appear to have been injurious to the local dairy industry, primarily by acting as a disincentive for local dairy development through their depressing effect on the producer prices for the locally produced raw milk. The depressed prices have impacted negatively on the incomes of the small-scale farmers who account for about 75 percent of dairy production in Kenya.

4.2 Sugar sector

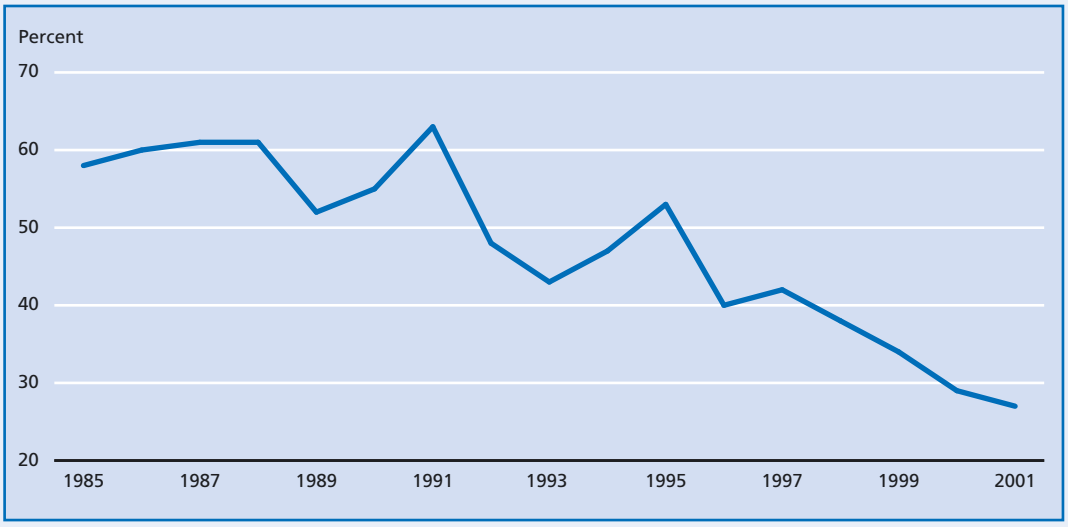
The types of sugar imported into Kenya are basically a "like product" as far as the locally produced product

FIGURE D11
Real milk producer and consumer prices, Kenya, 1985-2001 (1986=100)



Source: Central Bureau of Statistics, Kenya, Records

FIGURE D12
Trends in the producer's share in the retail price of packaged/pasteurized liquid milk, 1985-2001



Source: Karanja, A. M. (2003).

is concerned. In Kenya, sugar import surges in the past have been manifested through the existence of high levels of the inventory of sugar stocks in the domestic sugar factories. This study shows that the surges in sugar imports in Kenya do not arise directly from price competition, but from difficulties related to the administration of the duty-free quota allocations. The other likely contributor to sugar import surges in Kenya is the influx of illegal and unrecorded sugar imports due to cross-border trade in sugar. This factor reflects a trade surveillance problem, but it is a problem that is difficult to solve.

The difficulties in the administration of the import (i.e. duty-free) quota allocations cause delays in the importation of sugar when needed, and the subsequent late arrivals of the imported sugar when it may not really be needed in the country. The late arrivals of imported sugar often create serious domestic sugar marketing problems. The domestic sugar marketing problems arise because the traders who end up trading in the imported sugar are the same people who would be expected to get their sugar trading stocks from the warehouses of the local sugar millers. The result is that the local sugar millers end up with huge stockpiles of local sugar with limited outlets. Consequently, it takes time before they are able to sell off their sugar stocks and thus be in a position to pay for the sugarcane deliveries made by the farmers. Such sugar stockpiles and domestic sugar marketing problems in the recent past were experienced in 2002.

The delayed payments to sugarcane producers hurt the domestic economy in various ways, but primarily through a chain of causation in which the local cane farmers are unable to meet their financial obligations on time. The result is that their debt burden increases. For example, they find themselves unable to pay their children's school fees on time, or clear the credit for their farm inputs in time. Therefore, the difficulties related to the administration of the sugar industry safeguard quota allocations end up causing serious injuries to the domestic economy.

The sugar sector in Kenya is known to have suffered a serious injury as a result of the failure by the sugar millers to make payments to the farmers for their cane deliveries as a result of the surges in sugar imports in 2002. Equally, the sugar millers were unable to make payments to the suppliers for the services rendered, and the entire sugar sector accumulated heavy debts. The high levels of the industry indebtedness following the surges in sugar imports in 2002 are undoubtedly a tangible indicator of injury.

4.3 Maize Sector

The correlation of domestic producer prices of maize and quantities of imported maize in Kenya gives a mixed picture: since 1989, producer prices have exhibited an upward trend, but maize imports exhibit a lot of variation during the same period - see Figure M6.

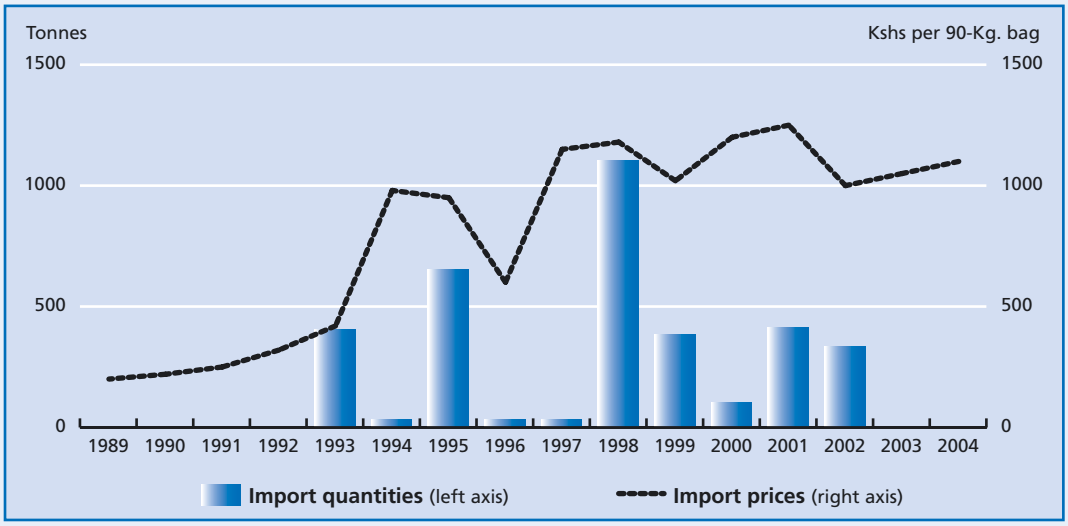
As expected, Figure M6 shows that the periods of high producer prices actually coincide with the periods when there are internal commodity shortages, and that is when commodity imports are required. The figure also indicates that high levels of imports in a given year have normally been followed by lower producer prices in the following year. Even though not conclusive, this outcome suggests that the high levels of imports tend to depress domestic producer prices, which is an indicator of injury to the domestic economy because depressed prices tend to discourage local production.

Just like in the case of the surges in sugar imports, the surges in commercial maize imports in Kenya are primarily attributable to the problems in the timing of the arrival of the imported maize into the country. The difficulties related to the approval and sanctioning of the maize imports on concessionary terms (i.e. duty free) by the government on food security grounds lead to delays in the placing and processing of the orders for maize imports. This delay results in late arrivals of the imported maize, and the imported maize may actually get into the country when it is not really needed, especially if some improvements in local supply have occurred.

The late arrivals of imported maize create some marketing problems, especially if the imports had been undertaken by the traders and the millers who would ordinarily be expected to get their maize stocks from the local producers and/or the warehouses of the NCPB. The resulting stockpiles of imported maize lead to limited maize marketing outlets for the local maize producers at the harvesting time. Even if the local farmers were able to deliver their maize to the NCPB as the buyer of last resort, the NCPB would not be able to sell its maize to the millers. A direct outcome of these marketing problems is the fall in producer prices of maize in the country, as was witnessed following the significant surges in maize imports in Kenya in 2001.

The inability of the NCPB to dispose of its maize stocks locally due to maize import surges also implies

FIGURE M6
Comparison of variations in maize producer prices and the level of maize imports in Kenya, 1989-2004



Source: Charts based on NCPB Records.

that the NCPB would not be able to pay for the maize delivered to its depots on time, even under conditions of declining producer prices. The delayed payments to the maize producers certainly cause injury to the domestic economy because the local farmers find themselves unable to meet their financial obligations on time. Hence the injury to the domestic economy that can be attributed to the delayed payments to the maize farmers is generally a result of reduced producers' purchasing power.

The reduced producers' purchasing power due to delayed payments triggers a number of problems with serious ramifications on the domestic economy, including the inability of the farmers to purchase enough quantities of improved farm inputs which results in the use of inputs at sub-optimal levels. The use of farm inputs at sub-optimal levels, among other effects, usually leads to poor farm yields, which further weaken the farmers' capacity to improve their earnings. Hence the maize import surges can have significant negative impacts in terms of destroying the rural economy in the maize growing areas of Kenya.

5. FOOD IMPORT SURGES: ATTRIBUTION AND NON-ATTRIBUTION FACTORS

5.1 The major factors that influence food imports in Kenya

Undoubtedly, many factors interact to influence the level of food imports in a given country. It is thus important that a discussion of food import surges gives an overview of the major factors that could influence the levels of the food imports in any country, and that an attempt is made to try and attribute these factors to the surges in the imports of the commodities covered in specific case studies.

The following are postulated to be the critical factors that influence the level of food imports in Kenya:

(i) the general economic environment and the consumers' purchasing power;
(ii) the general policy framework;
(iii) trade policy, particularly with regard to food imports in general and particular food commodities;
(iv) customs and other statutory requirements;
(v) other related economic and non-economic factors.

The above factors are reviewed briefly hereafter.

5.1.1 General economic environment and the consumer purchasing power

Economic theory suggests that per capita incomes and the general price levels are the key determinants of demand for consumer goods, but the level of demand may be expected to be modified by consumer tastes/preferences. Despite the high incidence of both rural and urban poverty in Kenya, estimated at over 56 percent by year 2000 (NWMS, 2001), demand for maize, sugar and liquid milk in Kenya still remains high, especially in urban areas. Any national shortages of any of these three commodities are fulfilled through imports, and this factor helps to explain why Kenya has normally experienced increasing levels of the imports of maize, sugar and dry milk powders whenever prolonged droughts that occasion shortfalls in the local production of these commodities have occurred.

The foreign exchange rate policy pursued by any country is expected to influence the country's domestic and international trade (Commodity Exports and Imports) policy. Rising exchange rates that reflect local currency depreciation tend to make exports cheaper while the imports become relatively more expensive, and vice versa. Available data on the monthly movements in the nominal exchange rate in Kenya between 1998 and 2004 show that there were significant monthly exchange rate fluctuations between January 1998 and December 2004. The exchange rate actually rose from a low of KShs 59.06 per USD in July 1998 to a high of KShs 81.27 per USD in October 2004 *(IMF International Financial Statistics)*.

The Central Bank of Kenya (CBK) attributes much of the inflationary pressure that Kenya has experienced in recent times to the shocks in oil prices (Governor, CBK, June, 2005). The rising exchange rate in Kenya since the 1980s must have decelerated the rate at which Kenya's commodity imports could

have increased, by making the imported goods in Kenya relatively more expensive over the same period. However, food is an essential commodity, and the three commodities covered in this study are among the key commodities that the Kenyans consume. Therefore, the shortfalls in local production of maize, sugar and raw milk whenever Kenya has experienced prolonged drought conditions partly helps to explain why Kenya's food imports have increased even in the face of depreciating local currency.

5.1.2 Kenya's general policy framework

The Government of Kenya is committed to the maintenance of a low and stable inflation, and this certainly affects Kenya's trade policy, particularly with regard to food imports. Experiences across the globe over the years attest to the fact that macroeconomic environments with low and stable rates of inflation provide for easy delivery of long-term economic growth. In the medium to long term, low inflation facilitates a faster growth of the economy, and, therefore, higher employment creation and poverty reduction (Governor, Central Bank of Kenya, June 2005).

Kenya has pursued and implemented a diverse set of economic policies in the past and undertaken several policy reform measures since the country became politically independent in 1963. The current public policy documents fully recognize this factor, including the fact that the country has had some significant paradigm shifts in its policy framework since then. The implementation of the Structural Adjustment Programmes (SAPs) in Kenya in the late 1980s represented the most important policy paradigm shift for the country since 1963. The SAPs were primarily designed to reform and liberalize the major commodity markets in Kenya, including the eradication of the price control and quantitative import restriction regimes that the country had continued to pursue since becoming independent in 1963.

The main changes introduced in Kenya as a result of the implementation of the SAPs in the country include the liberalization and decontrol of: (i) meat prices in 1987 (August), (ii) milk prices in 1992 (May), (iii) agricultural input markets in 1989, (iv) the removal of import duties and value added tax (VAT) on some key agricultural inputs in March 1993, (v) maize marketing in 1993, and financial and foreign exchange markets between 1993 and 1996. The other significant sectoral changes include the privatization of veterinary clinical, dipping and artificial insemination (AI) services in 1991. The policy reforms embraced within the SAPs thus intended to establish a framework of production, marketing, inputs supply and credit in which most of these functions are in the hands of the private sector.

Following marketing reforms in Kenya, the agricultural sector in the country now operates under a relatively liberalized environment. By and large, the past and current policy reforms in Kenya have been designed to align the country to the overall international trend that has come to be referred to as globalization. The objective is to prepare the country to become compliant with the GATT (General Agreement on Tariffs and Trade) and the WTO (World Trade Organization) protocols that govern international trade. This paradigm shift has somewhat guided the trade policy that Kenya pursues today, even though tariffs are still regarded as necessary in order to correct for adverse effects of imports on the domestic economy. In any case, Kenya actually became a signatory to the WTO protocols in 1995 (Nyangito, 2001) and is a committed observer of these protocols. The current policy objectives in Kenya are reflected in the economic development strategy which is spelt out in the blue print that is called the "Economic Recovery Strategy for Wealth and Employment Creation (2003-2007), or simply the ERS. The ERS is grounded on Kenya's desire to create an enabling macroeconomic environment for private sector investments in the country.

5.1.3 Kenya's trade policy

Overview

Kenya became a signatory to the WTO and hence made commitments to the Uruguay Round Agreement on Agriculture (UR-AOA) and other protocols in 1995 while the country was in the process of implementing the structural adjustment programmes (SAPs) which had started in the early 1980s (Nyangito, 2001). Since the SAPs are closely related to the UR-AOA, particularly with regard to the principles of improved

market access that require marketing liberalization, Kenya actually found it relatively easy to make commitments to the UR-AOA. Kenya's commitments to the WTO/UR-AOA include a binding tariff ceiling of 100 percent for all agricultural commodities under the Annex 1 Schedule of the AOA.

Apart from being a member of the WTO, Kenya is also both a member of the East African Community (EAC), that consists of Kenya, Uganda and Tanzania, and the Common Market for Eastern and Southern Africa (COMESA) that consists of 21 countries within this broader African region. Reliable statistics on regional and interregional trade within the EAC and the COMESA trading blocs are difficult to get due to the prevalence of cross-border trade flows that are largely unrecorded.

Under the EAC trade regime, Kenya grants market access to any commodities coming from Uganda and Tanzania at a tax reduction proportion on the normal tariff that is subject to review at the EAC summit from time to time. No other charge is allowable, without direct sanction by the appropriate organs in the EAC.

Under the COMESA Free Trade Area (FTA) protocol, food imports (or any other commodity imports) from Malawi, Zambia, Zimbabwe, Egypt, Djibouti, Madagascar, Mauritius and Sudan should enter the Kenyan market duty free. Kenyan food exports to these countries would also be granted duty free status, provided they are accompanied by certificates of origin. For non-FTA countries, Kenya's trade practices have to be consistent with the COMESA trade protocol.

Policy issues pertinent to dairy imports

The dairy industry in Kenya operates under a fairly liberalized environment, with the Kenya Dairy Board playing an industry regulatory role. As a member of the World Trade Organization (WTO), Kenya is committed to the principles that underpin free trade. Hence the country's dairy development policy aims at the promotion of international trade in dairy products as a means for the rationalization of dairy imports and exports to account for production cycles.

The overarching goal of Kenya's dairy policy is to improve the standards of living of the Kenyans by ensuring food security, increasing the real income of the dairy farmers and raising dairy productivity in order to be competitive in international dairy trade.

Policy issues pertinent to sugar imports

Kenya's sugar industry operates under a fairly liberalized environment, with the Kenya Sugar Board playing the industry regulatory role. Kenya participates in the world sugar trades through four trading regimes:

a) the preferential and quota regime given by the developed countries, particularly under the EU-ACP trading cooperation (previous arrangements under Lome Conventions and new trading arrangements under the Cotonou Economic Partnership Arrangements);
b) the EU Special Preferential Arrangements on Sugar (SPS);
c) the Free Trade Arrangements (FTAs) of the Common Market for Eastern and Southern Africa (COMESA) and the East African Community (EAC);
d) the residual free world market on sugar.

Since international sugar pricing is influenced by special and preferential regimes that have important historical ties with the European Union (EU), the proposed and ongoing EU sugar reforms will have serious ramifications on how the international sugar trade develops in future. The significance of the EU sugar reforms lies in the fact that the EU sugar policy has remained virtually unchanged since the 1960s. This sugar policy has often been attacked on the grounds that it harms the sugar producers in the less developed countries (LDCs) by encouraging huge quantities of heavily subsidized EU sugar to flow into the world market, thus lowering prices. Therefore, there is widespread concern that the liberalization of sugar trade under the World trade Organization (WTO) protocols and the EU sugar reforms are likely to affect the economies of the LDCs.

Policy issues pertinent to maize imports

Reforms on maize marketing in Kenya since 1986 have entailed a gradual transition from the single marketing channel that was being controlled by

the National Cereals and Produce Board (NCPB) as the state monopoly trading corporation to a multi-channel marketing system involving both the government and the private agents. With marketing liberalization, the NCPB has lost a substantial market share in maize marketing in Kenya, but it still remains a major player in grain marketing in the country, alongside the private business entities. Most of these business entities own or rent storage facilities in major producing areas and at the border points in addition to renting space from the relatively underutilized NCPB warehouses.

A major area of concern about maize marketing policy in Kenya after marketing liberalization has been the market distortion caused by the NCPB when the government directs the NCPB to buy maize from the farmers soon after harvesting at producer prices way above the dictates of the market. At the abnormally high prices offered, the NCPB is only able to buy a fraction of the maize from the farmers, due to its cash flow limitations. This distortion discourages investments in the maize marketing. The other key area of concern about maize marketing policy in Kenya after marketing liberalization has been the application of suspended duty to regulate maize imports during the seasons when maize surpluses arising from bumper harvests are projected.

The government introduced the suspended duty in 1994 following substantial maize imports by the private sector that were being blamed for the decline in maize prices. However, the application of the suspended duty has been limited for most of the subsequent years. In fact, over the 1998–2000 period, suspended duty was enforced only once in 1998, and has now been phased out. According to the Ministry of Finance and that of Agriculture, no other charges other than import tariff will be applied as a tool for regulating maize imports.

5.1.4 Customs and other statutory requirements

Food import prices are influenced by many economic and non-economic factors, including the foreign exchange rate movements, customs entry transactions and other statutory import requirements. Such factors can significantly increase transaction costs for the importers.

In Kenya, all the imports of food and other commodities are subject to customs and other statutory requirements. All traders/importers of goods into Kenya must declare them by filling the customs Entry Form C63. To clear the goods imported for commercial purposes, the customs regulations require that an importer uses a clearing agent, or a clearance license be obtained from the Customs Department if clearance is by oneself. Charges by clearing agents range between 1.5 percent and 2 percent of the c.i.f value of the imported goods. Therefore, this requirement is a disincentive to importers because the associated costs significantly eat into their profit margins.

The other requirements for commodity imports include the completion and presentation of the following documents to the customs authorities:

- Import Declaration Form (IDF)
- Original Invoice
- Pre-Shipment Inspection (PSI)
- Certificate of origin for goods to qualify for COMESA tariff
- KEPHIS Import permit
- KEBS Standards certificate
- PHO Health certificate

The food and other commodity imports requirements hinder smooth trade flows by raising the level of transaction costs and, hence, the consumer prices of the imported products. For example, an IDF fee of 2.75 percent is levied on all imports. Pre-shipment inspection (PSI) involves verification of the quality, quantity, price (including currency exchange rate and financial terms) and the customs classification of goods to be exported. The principal aim of applying PSI services in Kenya by the Customs Department is to curb against loss of customs revenue as a result of under-invoiced imports. These inspections also prevent the importation of products that are considered harmful to human health. Food imports are subjected to PSI only if their f.o.b value exceeds USD 5 000.

Food quality standards must be complied with for all imported products. Food imports, as in the case of the imports of all other commodities, are required to meet Kenya's Quality Standards, as prescribed by the Kenya Bureau of Standards (KEBS). Inspection

to verify conformity to quality standards is done at the port of entry, and the food commodity is then released immediately once it is certified safe for human consumption. KEBS Inspection services delay the commodity clearing time and thus add on to transaction costs. However, no fee is charged for these services.

The Entry Port Health Officials (PHO) are also required to subject food imports to inspection to ensure that the imported food meets the prescribed food safety standards, which include testing for radioactive material. Services for the testing of health standards are free, except for the radioactive test (when necessary) which is undertaken at a cost of Kshs 3 000 per consignment.

There are some other **import tariff and non-tariff charges.** Over the years, the government has used tariff and non-tariff charges to regulate food imports. In the case of maize imports, suspended duty was applied once in 1998, principally because of a maize surplus of 29 000 mt in the 1996/97 season. According to the Finance Act 2002, maize imports from both non-COMESA and EAC countries currently attract an import duty of 25 percent. However, there is a waiver, and maize imports from COMESA and EAC attract a preferential duty of 3 percent, which is subject to review from time to time, provided that such imports are accompanied by a certificate of origin issued by a designated authority from the country of origin.

5.1.5 Other related economic and non-economic factors

Humanitarian relief food operations

Kenya has experienced a serious influx of refugees due to political problems in its neighbouring countries (mainly Ethiopia, Somalia and Sudan) over the last two decades. To contain this problem, and with the support of the United Nations Humanitarian Commission for Refugees (UNHCR), Kenya has established two major refugee camps in the country, hosting about 0.25 million refugees. For their survival, the refugees in these camps depend primarily on humanitarian support from the United Nations (notably the UNHCR and the World Food Program, WFP) and non-governmental organizations).

Food commodities imported into Kenya by any of the relief agencies and destined for the refugee camps understandably gets into the country duty-free. Such relief food may be procured yearly or bi-annually, depending on the consumption needs. The three commodities under investigation in this study (i.e. maize, sugar and dry milk powders) do get imported into Kenya by the relief agencies to feed the people in the refugee camps in Kenya. For example, an estimated 5 000 mt of sugar are known to be consumed annually in these refugee camps. Some relief food destined to feed the people who still live in the neighbouring countries but need humanitarian assistance (e.g. in Southern Sudan) is also imported through Kenya.

Food commodities imported into Kenya under the humanitarian relief operations get into the country with tax-waiver advantage and are not supposed to enter the commercial marketing system in the country. However, some spillages do occur, and these inevitably cause market distortions and thus compound the problems associated with food import surges.

Spillages from imported "transit" food commodities

Many of the countries bordering Kenya are land-locked, and these include Uganda, Democratic Republic of Congo, Rwanda and Burundi. Due to the activities of some unscrupulous business people, a significant proportion of the goods imported through Kenya and destined for these land-locked markets is often diverted and sold in the Kenyan market. Again such spillages of commodity imports further compound the problems associated with food import surges.

Porous borders and weak surveillance system

Kenya has about eight official border points that are staffed with the normal administrators and Customs Officials. However, there are many other border points through which goods from the neighbouring countries can enter into Kenya unnoticed—this is the problem of unrecorded cross-border trade, which is difficult to control. Even at the official entry points, the surveillance system is not fool-hardy, and a significant degree of smuggling of goods into the country does

occur. Informal business deals can occur even at these official entry points, whereby traders may be able to smuggle food commodities into the country without proper documentation.

5.2 Food import surges: attribution and non-attribution issues

The interaction of the various factors that influence the level of food imports in a given country, as presented in section 5.1 above, either leads to increases or decreases in the level of food imports, depending on how these factors affect import demand. For all the three food commodities examined in this study, a major cause of the import surges appears to be the shortfalls in domestic supply of the particular food commodities for varying reasons. The evaluations of the periods when the increased levels of the imports of these commodities have occurred in Kenya show that, in most cases, such increases have occurred during and soon after the years when the country has had serious drought conditions.

The evaluations actually show that there were increased levels in the imports of dry milk powders in 1984, 1992, 1994, and from 1998 to 2001 (Figures D7 and D8 and Tables D3 and D4), and these happen to have been the periods when Kenya was experiencing serious drought conditions. Similarly, maize imports in Kenya experienced surges in years 1994, 1997, 2000, 2001 and 2004 at levels much, much greater than the 30 percent threshold (Figure M2 and Table M1), while the sugar import levels were above the three-years moving averages in 1998, 2001, 2003 and 2004 (Figure S6 and Table S1).

Other than the shortfalls in local production of food due to adverse weather conditions, the mismanagement of the local institutions has occasionally contributed to local product deficits. For example, the remarkable increases in dairy import during the 1999/2000 period were mainly as a result of the collapse of the main dairy processing firm in Kenya (i.e. the KCC) due to poor management in 1999. The collapse of the KCC is blamed for the acute shortages of processed dairy products in the country especially between 1999 and 2001. The problems related to the management of the sugar industry are also said to have contributed to sugar import surges in Kenya. Only the maize deficits in Kenya can be said to be primarily attributable to poor weather conditions in the country.

Problems related to the administration and timing of when to order and process food imports can also be said to have contributed to food import surges in Kenya. These problems lead to late arrivals of the imported food products in relation to the timing of when such imports would be needed in the country. The late arrivals of the imported food products imply that the imported products actually get into the country when the domestic production may have improved or risen to the levels that make the combined availability of these products in the country exceed the local demand. Whenever this phenomenon occurs, it creates marketing problems because the traders who trade in the imported products are the same people who would be expected to get their trading stocks from local producers. The result is that the imported food products end up contributing to a build-up of huge carry-over stocks in the succeeding year, thus affecting the trends in the quantities of imported food commodities.

In the case of sugar imports, the late arrivals of the imported sugar are associated with the problems related to the administration of the sugar imports quota allocation. In the case of maize, the late arrivals of the imported maize are associated with the difficulties in getting the approval and the sanctioning of the maize imports on concessionary terms (i.e. duty free) by the government on food security grounds. There have been no reported cases of the delays in the approval and the sanctioning of dairy products that can be associated with the import surges because dairy imports are not usually sanctioned on concessionary terms—the importers have to pay the applied tariff rates.

The level of food import surges in Kenya also appears to be exacerbated by the food relief operations of the WFP. However, such WFP operations are necessary only when the country has experienced drought conditions that lead to the need for external assistance. Other contributing factors to food import surges include the influx of illegal and unrecorded food imports into the country due to cross-border trade. This phenomenon reflects a problem in trade surveillance, yet this is a problem that is difficult to solve.

If one takes the consumer purchasing power and preferences as the main determinants of the food import surges, then one could argue that the factors

that influence the consumer purchasing power and preferences could be considered as non-attribution factors as far as import surges are concerned. Therefore, the factors discussed under section 5.1 above that do not affect food import demand directly could be considered as non-attribution factors for food import surges. For example, the poor weather conditions that reduce local food production from time to time and the poor management of the local food processing industries that create demand for imported products can be regarded as non-attribution factors as far as food import surges are concerned.

The weaknesses in the imports surveillance system lead to influxes of unrecorded food commodities that affect the food import levels in the country and this may also be regarded as a non-attribution factor to food import surges. The same can be said about the poor domestic infrastructure and lack of appropriate technologies that make it difficult to store or process domestically produced commodities to improve their quality and also be able to cope with seasonal fluctuations in domestic production against the background of the relatively stable food demand over time.

6. GOVERNMENT RESPONSE TO IMPORT SURGES

Due to its commitments to the World Trade Organization (WTO) and regional trade protocols, Kenya has responded to increasing levels of food imports by imposing appropriate levels of tariff to ensure that the imported food products do not pose a serious threat to prices at which the local "like", "competitive" or "substitute" commodities trade since 1995. However, such duties have been imposed while taking into account the provisions of the WTO and other trade protocols.

An evaluation of the levels of tariffs imposed on agricultural commodities imported by Kenya since 1996, excluding suspended duties, shows that such import tariffs have generally been lower than 35 percent, which is way below the country's committed or bound tariff ceiling of 100 percent. The government of Kenya has used suspended duties on agricultural commodities to raise import tariffs only when there has been an obvious need to protect domestic production. Kenya no longer uses non-tariff barriers as a form of domestic trade protection (Nyangito, 2001). For example, the government has taken some decisive responses in the case of the increasing levels of dairy imports into Kenya over the last 10 years.

As matter of fact, the Government of Kenya introduced a suspended duty in 1994 following substantial maize imports by the private sector that were being blamed for the decline in maize prices. However, the application of the suspended duty has been limited for most of the subsequent years. In fact, over the 1998 – 2000 period, suspended duty was enforced only once in 1998, and has now been phased out. According to the Ministry of Finance and that of Agriculture, no other charges other than import tariff will be applied as a tool for regulating maize and other food commodity imports. Commitment to this policy stance is validated by the non-application of suspended duty during the 2001/2002 crop season when a maize surplus production of 68 000 mt was recorded following a period of rising imports after the dry 1999/2000 crop season.

Prior to the increases in dairy imports in Kenya in 2001, the applied tariff rate on dairy products was 35 percent, this having been raised from 25 percent in 1999. Following the remarkable surge in dairy imports in 2001, a concerted public debate over the impact of the increasing levels of dairy imports on local production convinced the government that such import surges were injurious to the local dairy industry. Consequently, the government agreed to increase the tariff on imported dairy products from 35 percent to 60 percent through a gazette notice No. 12 of March 2002. This level of tariff was WTO compliant because it is within the bound tariff ceiling of 100 percent for all agricultural commodities that Kenya actually tied itself to after ratifying the WTO protocol in 1995. Despite the government action, the lobbyists were still not satisfied and they continued to call for an increase in the tariff for imported dairy products to 100 percent (***Local Media/The East African, 1st April 2002***).

The government has now restricted the importation of food products that can be sourced locally at competitive terms. This restriction applies to the imports of the three case study commodities. In this regard, the current applied tariff is 60 percent for dairy products and 25 percent for maize, vis-a-vis the country's commitment to the WTO to have a bound

tariff at 100 percent. For sugar, Kenya is allowed under the COMESA trading protocol to impose a maximum tariff of 123 percent, made up of 100 percent tariff, 16 percent VAT and 7 percent SDL to any imports of sugar above the COMESA safeguard quota allocation of 200 000 mt of sugar imports annually.

7. FOOD IMPORTS SURVEILLANCE

Many government institutions can be said to be involved either directly or indirectly in food imports surveillance. These include the Ministry of Trade and Industry, the Agriculture Sector Ministries (i.e. the Ministry of Agriculture, the Ministry of Livestock and Fisheries Development, and the Ministry of Cooperatives and Marketing), the Ministry of Finance (Kenya Revenue Authority—Customs/Domestic Taxes), and the Office of the President (Police Department). The Ministry of Trade and Industry will be involved on trade policy and licensing issues, while the Agriculture Sector Ministries will be involved on policy matters regarding food security and trade, including the issue of when the government should sanction food imports, particularly on concessionary terms on the grounds of food security. These institutions are not adequately staffed to perform their duties effectively. In any case, only the Customs Department (Kenya Revenue Authority) and the Police Department are involved directly in food imports surveillance.

Of course there are a few other specialist institutions that exist to assure food quality and compliance with international standards—such as Sanitary and Phytosanitary Standards (SPS) as prescribed in the WTO trade protocols—stationed at border entry points. These specialist institutions in Kenya include the Kenya Bureau of Standards, Kenya Plant Health Inspectorate Service (KEPHIS), and Public Health Officers (Ministry of Health) and Director of Veterinary Services (Ministry of Livestock and Fisheries Development), and they are supposed to support the Police and the Customs departments in the enforcement of the rules and regulations regarding the imports and exports trade.

Kenya, as reviewed elsewhere, has about eight official border points that are staffed with the normal administrators and Customs Officials. However, there are many other border points through which goods from the neighbouring countries can enter into Kenya unnoticed—this is the problem of unrecorded cross-border trade, which is difficult to control. Even at the official entry points, the surveillance system is not fool-hardy, and a significant degree of smuggling of goods into the country does occur. Informal business deals can occur even at these official entry points, whereby traders may be able to smuggle food commodities into the country without proper documentation. Sometimes, such evasive activities arise as a result of the traders being frustrated by the official documentation and clearance procedures. Therefore, there is need for capacity building and staff rationalization in the various institutions that work closely with the customs and the police departments in order to enhance their skills in imports documentation and surveillance in order to ensure efficiency and discourage evasive activities by the traders.

8. CONCLUSIONS

8.1 Dairy import surges

The analyses undertaken in this paper show that the surges in the imports of dry milk powders in Kenya in the past have been attributable to two major factors: (i) frequent droughts or adverse weather conditions that have adversely affect local dairy production, and (ii) the collapse of the local dairy industry in the 1990s following a number of years of poor management of the dominant dairy processor (KCC) in the country before May 1992, and the failure of the KCC to cope with the effects of the liberalization of the industry after May 1992.

Dry milk powders are "substitutable products" as far as raw milk is concerned because they can be used in the processing of many products that are normally processed from raw milk. As such, any surges in the imports of dry milk powders can be expected to affect the farm-gate or producer prices of raw milk. Consequently, increased imports of dry milk powders are likely to deny the local raw milk producers a market for their raw milk output and thus cause injury to the domestic economy by depressing local producer prices even when the consumer prices for the processed dairy products are rising.

Figure D11 actually shows that Kenya's raw milk producer prices remained relatively depressed even when the consumer prices for the processed dairy products were rising over the last two decades (i.e. since 1985). Consequently, the producer's share of the retail price of the packaged/pasteurized fresh liquid milk was exhibiting a declining trend over the same period (see Figure D12). Hence the surges in the imports of dry milk powders in Kenya that have occurred since 1985 have been injurious to the local dairy industry. This is because the producer prices do not appear to have been rising at levels that would have been conducive for increased dairy investments by the small-scale farmers who account for about 75 percent of dairy production in Kenya.

The government has now restricted the importation of milk products that can be produced in adequate amounts locally, including the dry milk powders that the KCC is able to supply locally, and the long-life (UHT) milk that has been imported from Australia, New Zealand and South Africa in the past. To protect the local industry, the government has put in place measures to protect the dairy industry in the interim as the industry recovers from the shocks of the late 1990s and the early 2000s. These measures include an applied tariff of 60 percent, vis-a-vis the country's commitment to the WTO to have a bound tariff at 100 percent.

8.2 Sugar import surges

Kenya produces mill white sugar, often described as raw sugar. The country imports both raw and refined sugar to meet its domestic requirements, currently estimated at 200 000 mt per annum. Even though the Kenya's mill white sugar (raw sugar) that Kenya produces does not directly compete with the refined sugar imports that go directly for industrial use, it is reasonable to argue that even the imports of the refined sugar, if cheap, do hurt the domestic economy because such imports take away any incentives to invest in refining facilities that would be able to convert the raw sugar produced locally into refined sugar for industrial use. Therefore, Kenya's sugar imports can be described as "like" products in relation to the domestically produced sugar.

Sugar import surges in Kenya in the past have been manifested through the existence of high levels of the inventory of sugar stocks in the domestic sugar factories. The study shows that the problem of the surges in sugar imports in Kenya does not arise directly from price competition, but from difficulties related to the administration of the duty-free quota allocations. The other likely contributor to sugar import surges in Kenya is the influx of illegal and unrecorded sugar imports due to cross-border trade in sugar. This factor reflects a trade surveillance problem, but it is a problem that is difficult to solve.

The difficulties in the administration of the import quota allocations cause delays in the importation of sugar when needed, and the subsequent late arrivals of the imported sugar when it may not really be needed in the country. The late arrivals of imported sugar often create serious domestic sugar marketing problems. The domestic sugar marketing problems arise because the traders who end up trading in the imported sugar are the same people who would be expected to get their sugar trading stocks from the warehouses of the local sugar millers. The result is that the local sugar millers end up with huge stockpiles of local sugar with limited outlets. Consequently, it takes time before they are able to sell off their sugar stocks and thus be in a position to pay for the sugarcane deliveries made by the farmers. Such sugar stockpiles and domestic sugar marketing problems in the recent past were experienced in 2002.

The delayed payments to sugarcane producers hurt the domestic economy in various ways, but primarily through a chain of causation in which the local cane farmers are unable to meet their financial obligations on time. The result is that their debt burden increases. For example, they find themselves unable to pay their children's school fees on time, or clear the credit for their farm inputs in time. Therefore, the difficulties related to the administration of the sugar industry safeguard quota allocations end up causing serious injuries to the domestic economy. For example, the sugar sector in Kenya is known to have suffered a serious injury as a result of the failure by the sugar millers to make payments to the farmers for their cane deliveries as a result of the surges in sugar imports in 2002. Equally, the sugar millers were unable to make payments to the suppliers for the services rendered, and the entire sugar sector accumulated heavy

debts. The high levels of the industry indebtedness following the surges in sugar imports in 2002 are undoubtedly a tangible indicator of injury.

8.3 Maize import surges

Kenya produces the white maize varieties, and these are the varieties that Kenyans consume, either as whole grain maize or as milled maize flour. Ordinarily, Kenyans would deject the consumption of the yellow types of maize varieties that are grown in the United States of America because they associate such varieties with the inputs in the manufacturing of animal feeds. As such, the Kenyan white maize is treated a product that has no close substitute in importation as far as the Kenyan producers and consumers are concerned. The imported white maize grain is thus a "like" product in relation to the domestically produced white maize grain.

Per capita consumption of maize in Kenya is estimated at 98 kg per person per year. Therefore, the total national demand for maize is about 30 million 90-kg bags per year (assuming Kenya's population is now around 30 million). The domestic maize supply deficits have continued to be recorded in the range of from two to six million bags (180 000 to 540 000 mt) annually, and these have usually been met through maize imports.

The analyses of the maize import and export parity prices for Kenya show that Kenya is neither a competitive maize exporter nor an attractive destination for maize exports. This explains why the NCPB has at times been forced to export maize at a loss whenever there have been serious domestic maize surpluses and the NCPB's stores for the Strategic Grain Reserves (SGR) get full, or when the country has occasionally found itself with significant maize carry-over stocks after wrong timings and arrivals of maize imports. Figure M1 indicates that maize imports in Kenya are made when domestic production shortfalls occur: the maize import peaks coincide with the troughs in domestic output of maize.

The industry stakeholders attribute commercial maize import surges primarily to the timing of the arrival of the imported maize into the country. The difficulties related to the approval and sanctioning of the maize imports on concessionary terms (i.e. duty free) by the government on food security grounds lead to delays in the placing of the orders and the actual processing of the imports. Such delays result in late arrivals of the imported maize. As such, the imported maize may get into the country when it is not really needed, especially if some improvements in local supply have occurred.

Under the circumstances, the late arrivals of imported maize lead to huge stockpiles of imported maize in the stores of the local maize millers and these stockpiles create some marketing problems. This is because the maize imports are sometimes undertaken by the traders and the millers who would ordinarily be expected to get their maize stocks from local producers or the warehouses of the NCPB. At other times, the NCPB would be the importer, and the stockpiles of the imported maize in the NCPB warehouses would imply that the NCPB would subsequently be unable to receive maize deliveries from the local producers.

Therefore, the resulting stockpiles of imported maize in the stores of the local maize millers and/or the warehouses of the NCPB following the late arrivals of the imported maize against the background of improving local production would result in limited maize marketing outlets for the local maize producers at the harvesting time. Even if the NCPB were able to receive some maize deliveries from the local farmers when the local traders and maize millers have huge stockpiles of imported maize, the NCPB would be unable to sell off its maize stocks to the local traders and millers. The NCPB would thus not be able to pay for the maize delivered to its depots until it is able to dispose of that maize when the market situation improves, but much later in the year.

The delayed payments to the maize producers due to the inability of the NCPB to dispose of its maize stocks certainly causes injury to the domestic economy because the local farmers find themselves unable to meet their financial obligations on time. Hence the injury to the domestic economy that can be associated with the delayed payments to the maize farmers is attributable to reduced producer purchasing power. This reduced producer purchasing power triggers a number of problems, including the farmers' inability to purchase enough quantities of improved farm inputs, which result in the use of inputs at sub-optimal levels. The use of farm inputs at sub-optimal levels, among other effects, usually leads to poor farm yields, which further weaken the farmers' capacity to improve their earnings. Hence the maize import surges can have a

significant negative impact in terms of destroying the rural economy in the maize growing areas of Kenya.

9. BIBLIOGRAPHY AND APPENDICES

9.1 Literature reviewed

The following are the major documents that were consulted and reviewed as the basis for the information from secondary sources that is found and used in the study report:

1. Bos, Maria Soledad (2003). The Impact of OECD Members' Agricultural Subsidies on the Case of Maize. Goldman School of Public Policy of the University of California at Berkeley, USA.
2. Central Bank of Kenya, (2005). The 16th Monetary Policy Statement, June 2005.
3. East African Community Secretariat, 2002 "Freeing Cross Border Trade of Agriculture Products.
4. FAO (2005). Extent and Impact of Food Import Surges in Developing Countries: Analytical Approach and Research Methodology for Country Case Studies. FAO Import Surge Working Paper No.7, May 2005.
5. Ingosi, Abner Khayumbi (2005). A Brief for the Permanent Secretary, Ministry of Agriculture (PS), on the Trends in the Imports of Maize, Sugar and Dairy Imports in Kenya, in Preparation for the Meeting of the PS with the FAO Food Imports Country Case Study Task Force, Nairobi, Kenya, October, 2005.
6. "Mukumbu, M. 1994. "Consumer and Milling Industry responses to Market Reform in Kenya." In proceedings of the conference on Market Reforms, Agricultural Production and Food Security, Egerton University/PAM, June, 1994.
7. Nyangito, H.O. 1997. "A review of Policies on Maize Sub-sector in Kenya". IPAR Discussion Paper No. DP 008/97.
8. Nyangito, H. O. (2001). "Kenya's State of Agricultural Trade Reform in the Framework of World Trade Organization". Paper prepared for the World Bank and the African Economic Research Consortium, Nairobi, Kenya, August 2001.
9. Nyangito, H.O. and Nyameino D.M., 2002. "Maize Production and Marketing in Kenya."
10. Nyoro, J.K., M.W. Kiiru and T.S. Jayne. 1999. "Evolution of Kenya's Maize Marketing Systems in the Post-Liberalization Era". Paper presented at the 4th Agricultural Transformation Workshop held in Nairobi, Kenya. June 1999.
11. Mbwika, J. M., Macharia, A. and Katei, S. (2005). Implications of Increased Imports of Agriculture Products from EU to Kenya on Local Production. EcoNews Africa, January 2005.
12. Gamba, P., Kodhek, Gem A., Karin, F. and Kwamboka, M. (2004). A comparative analysis of Kenya's farm level sugar cane production cost. Tegemeo Institute of Agricultural Policy and Development, Egerton Univeristy, Kenya, 18th March, 2004.
13. Sharma, Ramesh (2005). Overview of Reported Cases of Import Surges from the Standpoint of Analytical Content. FAO Import Surge Project Working Paper No. 1, May 2005.
14. Karanja, Andrew M. (2003). The Dairy Industry In Kenya: The Post-Liberalization Agenda. Paper presented at a dairy industry stakeholders workshop held in Nairobi, Kenya (27th August 2002). Tegemeo Institute/ Egerton University, Kenya.
15. Nyameino, David, Bernard Kagira and Stephen Njukia (2003). Maize Market Assessment and Baseline Study for Kenya. The Regional Agricultural Trade Expansion Support Program (RATES) Centre, Nairobi, Kenya, April 2003.
16. RATES (2003). Regional Maize Trade Policy Paper. The Regional Agricultural Trade Expansion Support Program (RATES) Centre, Nairobi, Kenya, September 2003.
17. Jayne, T. S., R. J. Myers and J. Nyoro (2005). Effects of Government Maize marketing and Trade Policies on Maize Market prices in Kenya. Draft Working Paper, Tegemeo Institute, Egerton University, Kenya.
18. FAO (2005). Discussions/Proceedings of the FAO Workshop on the Status of Country-specific Food Import Surges Case Studies, held in Rome, Italy, 13-15 December 2005.
19. World Trade Organization (WTO) (March, 2003). Negotiations on Agriculture: First Draft of Modalities for the Further Commitments. Committee on Agriculture, Special Session. Document Reference Number TN/AG/W/1/Rev.1 dated 18 March 2003.
20. World Trade Organization (WTO) (2000). The WTO Agreement Series 3: Agriculture. WTO, Switzerland.

Appendix I
Case Study of the Githunguri Farmers Dairy Cooperative Society

Githunguri DFCS is an example of the many DFCSs country-wide that could be affected by the collapse of the dairy industry in Kenya if the influx of cheap dairy products into Kenya was not controlled. It is located in the Githunguri Division of Kiambu District in the Central Province of Kenya and is just over 40 km away from Nairobi, the capital city of Kenya. The Githunguri DFCS used to deliver its milk to the KCC when the latter was still performing well and paying the farmers promptly for the milk deliveries. However, after the collapse of the KCC in the late 1990s, the dairy farmers started to experience extremely difficult conditions in selling their milk, and the DFCS had to look for alternative outlets, including selling its milk to those who came to buy milk at factory gate and any others who could process it, including deliveries to the new or upcoming processors, such as Brookside and Spin Knit dairies. The farmers get premium prices because their milk is centrally collected and is of good quality.

The DFCS inaugurated its own dairy processing plant in 2004, and is now producing pasteurized milk (fresh milk), butter, cheese, and yoghurt. According to Mr. Mutisya, the DFCS's Sales and Marketing Manager, the DFCS targets the low-income market segment, by delivering its products in cheap packages. For example, whereas the major and established dairy processors package their pasteurized (fresh liquid) milk in tetra-pak containers that retail at KShs 25 per half-litre, the DFCS packages its pasteurized milk in polythene satchets that retail at KShs 20 per half-litre. Bulk deliveries of pasteurized milk are also organized for mass retail outlets, especially within the low-income areas of the City of Nairobi and the neighbouring Athi River Township.

According to Mr. Baiya, the Chairman of the DFCS's management committee, the society has a membership of 6 000 dairy farmers, whose average monthly income in 2004 was estimated at KShs 6 600/= (equivalent to about just under US$100 per month). The DFCS's daily milk intake is 75 000 litres and employs a labour force of 130 people. The milk received at the society's processing plant is processed into fresh liquid milk (pasteurized), butter, cheese and yoghurt. Hence the DFCS has an annual turnover of about 27 million liters worth over KShs 540 million. According to the sales and marketing manager of the DFCS, Mr. Mutisya, the milk market over the last three years has been relatively stable, even though it is vulnerable to increased competition from the importation of dry milk powders. Hence there is fear that the DFCS could collapse as a result of competition from cheap imports of dairy products.

Appendix II
A Note on the Effects of Government Influence on the Pricing and Marketing of Maize in Kenya

1. A major area of concern about maize marketing policy in Kenya after marketing liberalization has been the market distortion caused by the NCPB when the government directs the NCPB to buy maize from the farmers soon after harvesting at producer prices way above the dictates of the market. At the abnormally high prices offered, the NCPB is only able to buy a fraction of the maize from the farmers, due to its cash flow limitations. This distortion discourages investments in the maize marketing.

2. Another key area of concern about maize marketing policy in Kenya after marketing liberalization has been the application of suspended duty to regulate maize imports during the seasons when maize surpluses arising from bumper harvests are projected. For instance, the government introduced a suspended duty in 1994 following substantial maize imports by the private sector that were being blamed for the decline in maize prices. However, the application of the suspended duty has been limited for most of the subsequent years. In fact, over the 1998 – 2000 period, suspended duty was enforced only once in 1998, and it has now been phased out. According to the Ministry of Finance and that of Agriculture, no other charges other than import tariff will be applied as a tool for regulating maize imports.

3. Presently (November 2005), there are serious problems related to maize marketing in the country after a government directive to the NCPB to buy maize from the producers at prices way above what the major players in the industry (i.e. millers) consider to be the competitive market price. However, the NCPB is not in a position to carry out that directive immediately because its depots/warehouses are still stockpiled with maize purchases from the previous year. The NCPB thus has to configure how to purchase the current crop while experiencing huge stockpiles of maize from previous purchases.

4. The government directive to the NCPB is that it should purchase maize from the farmers at KShs 1 300 per 90-kg bag, plus another KShs 100 per bag to cover transportation charges (local daily newspapers: "Saturday Nation", 26 November 2005, p.18 and "Daily Nation", 28 November 2005, p.20). Yet the four leading maize millers in Kenya are offering to buy maize at KShs 970 per 90-kg bag (as at 25 November 2005), while the marketing middlemen in the region are taking advantage of the situation and are offering to buy maize from the farmers at prices ranging from KShs 700 to KShs 800 per 90-kg bag ("Saturday Nation", 26 November 2005, p.18). This state of affairs is creating serious concerns to the farmers, and they are appealing to the government to direct the NCPB to start buying the farmers' crop immediately, with a threat that they (farmers) would hold street demonstrations if the government does not act quickly ("Daily Nation", 28 November 2005, p.20).

5. The above story gives a picture of the politics of maize marketing in Kenya. One may expect that the NCPB will have to buy maize at prices slightly higher than what the millers are offering, but somewhat lower than what the government has directed, given the desperate situation that the farmers are finding themselves in—our opinion is that an NCPB producer price of about KShs 1 200 per 90-kg bag would be acceptable to the farmers. The above story certainly shows why the regional exporters of maize to Kenya, such as the Ugandan suppliers, often complain that the government involvement in maize marketing through the NCPB is a deliberate move to frustrate trade in the usually less costly maize imports from the neighbouring countries.

Appendix III
A Note on the Evaluation of the Profitability of Importing and Reconstituting Dry Milk Powder into Liquid Milk for Sale in Kenya

1. The profitability of importing and reconstituting dry milk powder into liquid milk for sale in a given country will primarily depends primarily on the landed (c.i.f.) price for the dry milk powder and the internal processing and transportation costs. In the case of Kenya, Mombasa is the main port of entry for imported products for Kenya. The c.i.f. Mombasa price for imported dry milk powder thus determines the profitability of importing and reconstituting the dry milk powder into liquid milk for sale in Kenya. The c.i.f. Mombasa price of dry milk powder usually fluctuates from a low of USD 2 000 to a high of USD 2 500 per mt in most cases.

2. If we took the c.i.f. Mombasa price for whole dry milk powder imported from New Zealand in October 2005 as USD 2 400 per mt, the domestic price for reconstituted "powder liquid milk" from that powder could conservatively be estimated as follows:

   (a) the c.i.f. Mombasa price of whole dry milk powder at USD 2 400 per mt is equivalent to USD 2.4 per kg, or KShs 180 per kg (at an exchange rate of KShs 75 per USD 1);

   (b) by adding 2.75 percent import declaration fee (IDF), the c.i.f. Mombasa price for a kg of imported dry whole milk powder becomes KShs 184.95, to which must be added the 60 percent custom duty to get the domestically competitive price for dry whole milk powder at Mombasa, which amounts to KShs 295.92;

   (c) the next step involves the movement of the dry whole milk powder from Mombasa to Nairobi (the capital city of Kenya) for processing into liquid milk by the main local dairy processing plants that are all located there since Nairobi is the main consumer centre for dairy products: conservatively, we estimate transportation cost at 1 percent and processing at 9 percent of the cif price adjusted for the 2.75 percent IDF and 60 percent duty charges, and this results into an adjusted cost of KShs 325.51 per kg of dry whole milk powder that has duly been transported from Mombasa to Nairobi and consequently reconstituted into "powder liquid milk" within Nairobi;

   (d) dry milk powder processing that involves the reconstitution with water results into a standardized "liquid milk product" (call it "powder liquid milk") whereby a kg of dry milk powder gives 8 litres of "powder liquid milk": this implies that the equivalent price for a litre of reconstituted "powder liquid milk" based on the KShs 180 cif Mombasa price for a kg of dry whole milk powder would be approximately KShs 325.51 divided by 8, which works out at KShs 40.69 per litre.

3. In the above analysis, a 10 percent mark-up on the landed Nairobi cost of a kg of dry whole milk powder is incorporated to take care of transportation and processing costs, and this mark-up is considered to be on the higher side. The c.i.f. Mombasa price of dry milk powder is taken at a relatively high level of USD 2 400 per mt, even though the said price usually fluctuates from a low of USD 2 000 to a high of USD 2 500 per mt in most cases. Therefore, the final domestic price for reconstituted "powder liquid milk" is not expected to exceed KShs 40 per litre, as compared to the current price of Kshs 50 per litre

for the locally produced and pasteurized "fresh liquid milk". This evaluation shows that importing and reconstituting dry milk powder into liquid milk for sale in Kenya can be a very attractive enterprise. This factor would encourage the local dairy processors who import dry milk powders not to offer better prices for locally produced raw milk if the imports of dry milk powders were not regulated at all.

4. Milk consumers in Kenya have some significant preference of "fresh liquid milk" over the reconstituted "powder liquid milk". If we defined "premium price" for the domestically produced pasteurized "fresh liquid milk" to be the maximum price that the consumers would still be willing to pay for the domestically produced pasteurized "fresh liquid milk" rather than go for the cheaper reconstituted "powder liquid milk", and if we assumed that a 10 percent premium over the price of the reconstituted "powder liquid milk" defines that "premium price" for the domestically pasteurized "fresh liquid milk", then we could argue that KShs 45 per litre of the domestically pasteurized "fresh liquid milk" would define that "premium price". Current market price for the domestically produced pasteurized "fresh liquid milk" is KShs 50 per litre, which is higher than the calculated "premium price". Therefore, we expect that if the the reconstituted "powder liquid milk" were to sell at about KShs 41 per litre, this product would be significantly attractive to the domestic consumers of liquid milk.

5. The above evaluations show that it would be highly profitable for the local dairy processors to import dry milk powders, reconstitute them and sell the reconstituted "powder liquid milk" at prices that would even be lower than the domestic prices for pasteurized liquid milk. Such prices would thus not reflect the true local production situation in relation to local demand, and there would be no incentive to increase prices of locally produced raw milk, even when its supply falls due to poor weather conditions. For this reason one could argue that the increased imports of dairy products in Kenya are likely to cause some injury to the domestic economy.

Appendix IV
Summary of the Group Discussions on Commodity Specific Issues at the FAO Workshop on the Status of Country-specific Food Import Surges Case Studies, held 13th -15th December 2005, Rome, Italy

- **Dairy group:**

1. Noted that difficulties in Price Analysis arise because complete data sets for different markets are difficult to get.
2. One also deals with a multiplicity of products of varying quality (differences create problems in analyses).
3. Trans-shipments complicate information of sources of origin, and complicate the analysis.
4. Raw/fresh or unprocessed milk is a non-tradable commodity. So how do we explain the price formation process?
5. Surges are not an issue, unless there is evidence of an injury! Otherwise, they may be good if looked at from the consumer perspective as they contribute to the maintenance of relatively stable consumer prices.
6. Injury should be in terms of disruptions in local production

- **Maize group**

1. The notion of surges in maize in the three countries may not be appropriate:

(a) There are many non-attribution factors.
(b) The share of imports has remained consistent.
(c) Spikes in imports are a reaction to severe shortfalls.
(d) Even in those years of spikes, the imports did not fill consumption requirements.
(e) The analysis should look at the supply overhang, timing of food aid and their relation to prices.

2. Government policies sometimes encourage importation or impose bans on exports.
3. Other factors which could contribute to an import surge (in the case of Malawi).

- annual adjustments in maize prices, introduction of a maize price band and its eventual abolishment
- deregulation of maize marketing
- lessening restrictions on maize imports and maintenance of export licenses for maize
- removal of fertilizer subsidies

4. Domestic policies make it difficult to attribute price movements to a surge

- **Sugar group**

1. Discussion revolved on the situation in Kenya, Malawi, and Cote d'Ivoire. The discussion noted major differences.
2. Noted the complexity of the sugar sector in different countries. For, example, the Cote d'Ivoire has a reference price which determines the imposition of a tariff on sugar imports; Kenya and Malawi do not.
3. Trade policy intervention: In Cote d'Ivoire, processors used to be allowed to import sugar, but imports have been banned since 2004.
4. Noted differences in domestic market management problems, particularly because there are tendencies to take measure intended to maintain stability in consumer prices, e.g. in Cote d'Ivoire.
5. Noted difference in production and market structure. For example, the processors in Malawi and Cote d'Ivoire control production (over 90 percent); in Kenya they do not.

Appendix V
Text Appendix Tables and Figures

APPENDIX V - Table M1
National maize production and NCPB nominal maize prices and trading volumes (imports and exports), 1988-2004

Crop season year	Maize production in Kenya in 000 mt	NCPB nominal maize buying prices in KShs per 90-kg bag	NCPB nominal maize selling prices in KShs per 90-kg bag	Quantities of maize bought in 000 of 90-kg bags	Quantities of maize sold in thousands of 90-kg bags	Recorded maize imports in 000 mt	Recorded maize exports in 000 mt
1988/89	2761	201	326	-	-	0	167
1989/90	2631	221	337	-	-	0	110
1990/91	2290	250	337	2588	7365	0	160
1991/92	2340	300	358	3508	8087	0	19
1992/93	2430	420	646	5427	2832	415	0.42
1993/94	2089	950	1280	5143	5641	13	0.11
1994/95	3060	920	1280	5940	745	650	1.7
1995/96	2699	600	887	1109	1224	12	154
1996/97	2160	1127	1100	691	597	15	221
1997/98	2214	1162	1318	1666	161	1104	9
1998/99	2400	1009	1209	384	1356	371	13
1999/00	2322	1200	1436	1949	1596	75	37
2000/01	2160	1250	1300	3426	815	417	7
2001/02	2776	1000	1250	2835	261	324	6
2002/03	2340	1022	1265	980	2160	0	0
2003/04	2300	1100	1325	1782	1504	0	0

Source: NCPB and Central Bureau of Statistics (CBS)Records and Publications (e.g. Economic Survey).

APPENDIX V - Table M2
Cost implications of imported yellow maize to Kenya (ex-US gulf) as of 3 April 2000

Scenario With Duty (25 percent)			
Importation process	USD/tonne	KSHS./tonne	KSHS./90 kg bag
			(Exchange rate=KShs 74.90/USD1)
F.O.B. (US GULF): Date: 03/04/2000	131.90	9 879.31	889.14
Freight	28.00	2 097.20	188.75
C&F Mombasa	159.90	11 976.51	1 077.89
Insurance (1 percent of C&F)	1.60	108.22	9.74
Maize Import Duty (25 percent)	39.98	2 994.13	269.47
IDF Fees (2.75 percent of C&F)	4.40	329.35	29.64
Insurance (1 percent of C&F)	1.60	119.77	10.78
Stevedoring	8.50	636.65	57.30
KPA Shore Handling	5.00	374.50	33.71
KARI (1 percent of C&F)	1.60	119.77	10.78
KBS Analysis (0.2 percent of C&F)	0.32	23.95	2.16
Min. of Health (0.2 percent of C&F)	0.32	23.95	2.16
Bagging Charges	6.50	486.85	43.82
New P.P Bag	4.00	299.60	26.96
Transport To Warehouse	3.00	224.70	20.22
Storage(1 Month) and Handling Charges	1.20	89.88	8.09
Fumigation Charges	1.50	112.35	10.11
Agency Fees	1.00	74.90	6.74
Incidental Charges	1.00	74.90	6.74
Landed-into-store cost at Mombasa	241.41	18 069.98	1 626.30
Road Haulage to Nairobi	32.50	2 434.25	219.08
LANDED-COST AT NAIROBI	273.91	20 504.23	1 845.38

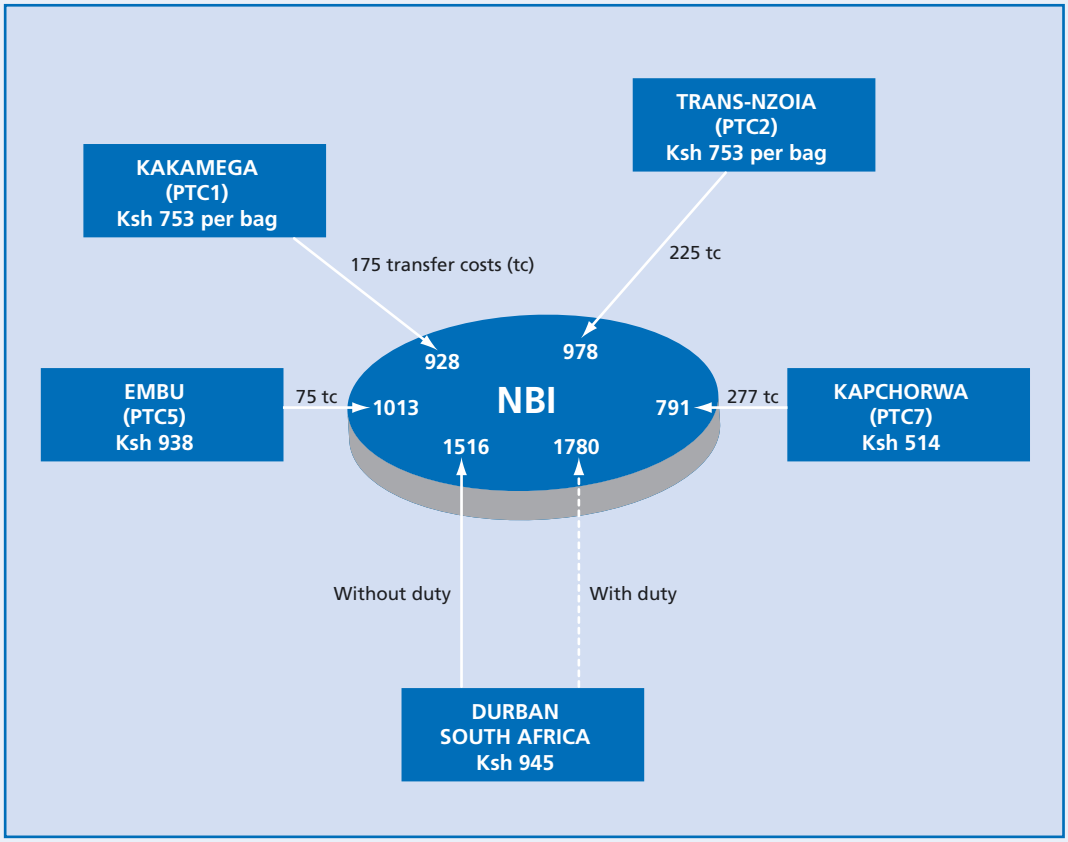
Source: National Cereals and Produce Board (NCPB), Nairobi, Kenya.

Appendix V - Table M3
Cost of exporting maize from Kenya f.o.b. Mombasa, June 2005

Activity	Scenario Source 1	Scenario Source 2	Scenario Source 3	Scenario Source 4
	(Eldoret)	(Naivasha)	(Nairobi)	(Konza)
Procurement	850.00	850.00	850.00	850.00
Loading into store	3.00	3.00	3.00	3.00
Maintenance	3.50	3.50	3.50	3.50
SUB-TOTAL	856.50	856.50	856.50	856.50
Loading out of store	3.00	3.00	3.00	3.00
Transport to Mombasa	359.10	257.85	219.15	184.05
Loading into store Mombasa	3.00	3.00	3.00	3.00
Maintenance (quarantine)	4.35	4.35	4.35	4.35
Certification (KEPHIS)	0.20	0.20	0.20	0.20
Loading out of store	3.00	3.00	3.00	3.00
Inspection	1.35	1.35	1.35	1.35
Transport to Port	0.80	0.80	0.80	0.80
Handling at Quayside	3.00	3.00	3.00	3.00
SUB-TOTAL	377.80	276.55	237.85	202.75
TOTAL COST	1 234.30	1 133.05	1 094.35	1 059.25
Convert to f.o.b. Mombasa price: assume an Exchange Rate of KShs 78.3 per USD 1	175.15	160.78	155.29	150.31

Source: National Cereals and Produce Board (NCPB), Nairobi, Kenya.

APPENDIX V - Figure M1
Import parity price for ex-Durban (South Africa) maize landed in Nairobi, Kenya, in 2003



Source: Tegemeo Institute, Nairobi, Kenya, 2003 Situation.

ANNEX II

THE EXTENT AND IMPACT OF IMPORT SURGES IN THE PHILIPPINES: THE CASE OF ONIONS AND TOBACCO

(Report prepared by Magdalena Casuga and Ramesh Sharma)

1. INTRODUCTION

1.1 Rationale and objectives

This study is part of an FAO project which documents and analyzes the capacity of the developing countries to use enhanced trade surveillance and trade remedy measures with the objectives of identifying, analyzing and responding to import surges. The study specifically aims to: 1) document surge or increase in imports; 2) investigate the reasons for the surge; 3) identify the injury impact both on the local industry and other related sectors; and 4) determine causality mainly through the elimination of other potential contributors to the injury indicators. This case study, which is one among a number of commodity studies in several countries in Asia and Africa, deals with the case of Philippine onions and tobacco.

In 2000, the Philippines enacted the Safeguard Measures Act (or, Republic Act 8800) to enable the government to implement the safeguard measures provisions of the World Trade Organization's Agreement on Agriculture. Since then, requests from farmers for protection against increased importation of a number of agricultural products were brought to the attention of the Philippines' Department of Agriculture (DA). As soon as the systems for the implementation of safeguard measures, were set in place, particularly special safeguards, the Philippine government through its Bureau of Customs (BOC) and the DA, imposed special safeguards duty on onions, as well as some chicken and pork imports. Requests for safeguard protection were also heard from the tomato paste industry and the vegetables sector including cabbage, potato, and carrots.

The imposition of special safeguard (SSG) duty on onions, based on the breaching of its established trigger price, has been on and off since 2002. This was prompted by the alternating requests of farmers and complaints of importers. To date, SSG duty on onions is lifted and remains until onion farmers request for its re-imposition and deemed warranted by the DA.

Meanwhile, the DA has also received a safeguard protest from the local tobacco industry. Domestic tobacco farmers through their national association has requested for remedial safeguards against what they described as "tremendous increase in importation due to continuing tariff reduction and trade liberalization that is causing the industry to sell lesser quantities of tobacco, and traders buying at low prices." The DA is now evaluating the request.

Hence, with regards to the importation of agricultural commodities and the use of trade remedy measures, the outstanding concerns for the Philippine government particularly of DA are onions and tobacco. As such, this study on the extent and impact of import surges in the Philippines focuses on these two commodities.

This report is organized into five major sections, as follows. The rest of this introductory part, Section I, provides a description of the case commodities--onions and tobacco; the concerns of stakeholders and the corresponding response of the government. Section II establishes import surge or increases and identifies potential factors that influenced the surge. An analysis of the injury elements is presented in

Section III followed by a discussion of causality and other factors that might have caused the injury experienced by the domestic onion and tobacco industries in Section IV. Section V summarizes the findings of the case study and concludes the report.

1.2 Description and importance of local products

Onions and tobacco are two of the major crops grown in the Philippines. Onions are a favorite staple seasoning. Its pungent aroma and sharp taste makes it ideal for spicing up many Filipino dishes--meat, salads and vegetable dishes. It is also used to cure physiological disorders such as cough, obesity, insomnia, hemorrhoid and constipation. There are two types of bulb onions grown in the country, namely, the yellow and the red onions. The yellow varieties grown are either the *granex* (flat) or the *grano* (round) type. Red onion varieties produced domestically are red *creole* and red shallots (cluster onions). Onions are produced mainly in the provinces of Ilocos Norte, Ilocos Sur, La Union and Nueva Ecija, all in the Luzon island. It is usually planted from October to February. Peak harvest season is from March to April.

Tobacco crops grown in the country are of two main types: i) aromatic tobacco comprising of Virginia, Burley and Oriental or Turkish varieties; and ii) native or dark air-cured tobacco. Virginia tobacco provides pleasing fragrance while Burley mainly serves as absorbent to retain additives. Turkish or Oriental tobacco gives distinct flavour, sweet taste and aroma, and improves the burning quality of tobacco. Native or dark air-cured tobacco, on the other hand, is usually of neutral flavour, but strong and full-bodied. In general, domestically-produced tobacco are characterized by low nicotine and high sugar content and are used mostly as filler for manufactured cigars, cheroots and native cigarettes. Tobacco crops are grown in 26 provinces nationwide.

During the last five years (2001-2005), the annual volume of production of tobacco averaged at 49 thousand metric tonnes per annum while production of onions was at 88 thousand metric tonnes. These production quantities each shared only less than one percent of total crop production or together comprised 0.2 percent (Table 1). In 2004, a total of 33 800 hectares were planted to tobacco while 9 500 hectares were planted to onions, which represent 0.28 percent and 0.08 percent, respectively of the total area planted to all types of crops.

Many Filipinos rely on onions and tobacco production for a living. The Philippine Association of Tobacco-based Cooperatives (PATCO) estimated that there are over 1.9 million Filipino farmers and workers, and their families dependent on the tobacco industry. Meanwhile, the onion industry is composed of about half million farmers and labourers.

1.3 Stakeholders' concerns

Farmers' views[1]

As early as 2000, onion farmers had complained that the quantity of onion imports had increased and that it had adversely affected their income/ livelihood. This phenomenon was greatly felt in 2001 when they observed that markets were flooded with imported onions. They alleged that the onslaught of cheap onion imports mostly coming from China (and including those that entered the country illegally), had resulted in the lowering of prices of domestically-produced onions. Farmers further expressed their concern in the timing of the entry of imports as they were usually brought in during harvest time or when local produce have just been released from storages.

Tobacco farmers, on the other hand, referred to the unusually high importation of unmanufactured tobacco in 2004 compared to earlier years. They noted that during the said year, the volume of importation exceeded local tobacco production. This phenomenon, happening for the first time, reportedly began causing injury to the domestic industry in the

[1] The views of onion farmers presented here were raised during a meeting conducted with the representatives of two onion farmers' groups namely, the Katipunan ng Samahang Magsisibuyas ng Nueva Ecija (KASAMNE), a provincial federation of primary cooperatives whose members are onion farmers, and the Union of Growers and Traders of Onion in the Philippines (UGAT), the umbrella organization of onion farmers' associations in the country. The views of tobacco farmers, on the other hand, are mainly those stated in the general safeguards petition of the Philippine Association of Tobacco-based Cooperatives (PATCO) filed with the Philippines' Department of Agriculture. PATCO is a national association of cooperatives whose members are tobacco farmers.

TABLE 1.
Agricultural crop production, by type of crop, 2001-2005 (quantity, in thousand metric tonnes)

Crop	2001	2002	2003	2004	2005	Average (2001-2005)	
						Quantity	*% share*
Total	67 021	67 997	71 610	75 151	71 569	70 670	100.00
A. Cereals							
Palay	12 955	13 271	13 500	14 497	14 603	13 765	19.48
Corn	4 525	4 319	4 616	5 413	5 254	4 825	6.82
B. Major Crops							
Coconut	13 146	13 895	14 294	14 366	14 797	14 100	19.96
Sugarcane	21 709	21 417	23 978	25 579	20 795	22 696	32.09
Banana	5 059	5 275	5 369	5 631	6 282	5 523	7.81
Pineapple	1 618	1 639	1 698	1 760	1 788	1 700	2.41
Coffee	112	107	106	103	106	107	0.15
Mango	882	956	1 006	967	985	959	1.36
Tobacco	48	50	53	48	45	49	0.07
Abaca	73	63	70	74	74	71	0.10
Rubber	264	268	274	311	326	289	0.41
Cassava	1 652	1 626	1 622	1 641	1 678	1 644	2.33
Camote	545	549	547	545	575	552	0.78
Peanut	26	26	26	27	28	27	0.04
Mongo	28	27	26	26	27	27	0.04
Onions	83	96	94	87	82	88	0.13
Garlic	15	16	16	15	13	15	0.02
Tomato	146	149	150	172	174	158	0.22
Eggplant	170	180	177	183	188	179	0.25
Cabbage	90	91	92	93	91	91	0.13
Calamansi	182	181	181	179	203	185	0.26
C. Other Crops	3 694	3 794	3 417	3 432	3 456	3 559	5.05

Notes: Details may not add up to total due to rounding.
Source : Bureau of Agricultural Statistics

same year. Farmers claimed that because of increased importation, they were able to sell lesser quantities of tobacco compared to the prior years. Traders even bought their tobacco at low prices. Tobacco farmers further cited in their petition for safeguards, the following injuries that were attributed to increased importation: (i) decreased margin of profit; (ii) limited market resulting in lower production; (iii) difficulty selling of 12 million kilos of tobacco valued at 220 million pesos; and (iv) decreased employment.

Importers/traders' views[2]

Onion importation. Importers denied having increased their importation of onions at any time in the recent past. They asserted that there was even a decline in their importation particularly in 2003 and 2004 attributed to what they described as "restricted issuance of import permits" by the Bureau of Plant Industry (BPI). They cited in particular the period January to June 2004, during which they claimed no import permits/papers were issued to them.

Contrary to onion farmers' claim that importation has always been ill-timed, importers maintained that entry of onion imports never coincided with the local harvest period of March to May. In particular, onions from the Netherlands were brought in from October to February while those coming from China usually entered the Philippine ports from June to December. Moreover, onion shipments were usually placed in storages/warehouses or straight to hotels and restaurants. Nonetheless, they emphasized that they *import based on prevailing prices and not on stocks or available domestic supply*.

Importers also cited that the onions they have brought into the country were mostly of the white or yellow granex variety. The kind that are produced locally, i.e., red bulb onions, were imported only in minimal quantities. More importantly, they opined that *imported onions have different markets from those of local onions*. The main buyers/consumers of imported onions are hotels, restaurants and food chains (where onions are used for example in burgers, salads, pizza, onion rings), whereas, local onions are bought and consumed mostly by households. Further, domestic prices of these imported onions are usually higher locally-produced onions.

Tobacco importation. *Importation is necessary because domestic production cannot meet demand and quality requirements of manufacturers.* It was cited by a leading manufacturer in the country that the local market consumes approximately 90 billion cigarettes annually, which would require about 80 000 metric tonnes of processed tobacco. The current level of locally- processed tobacco estimated at around 15 000 metric tonnes annually is inadequate to meet the demand. Manufacturers further clarified that there is not enough local tobacco with the *quality* that they require. Cigarette manufacturers search for the kinds of tobacco that would produce the right blend, both in the local and foreign markets. Each manufacturer fashions its product according to market/client preferences and aims to make such finished product as consistent as possible. If there are suitable tobacco varieties, they opined that it would be highly illogical for manufacturers to import. Since there is not enough local supply of the specific quality that manufacturers need, they are left with no other option but to import.

Local tobacco differs from imported tobacco in terms of usage in the manufacture of cigars/ cigarettes. Imported tobacco leaves differ from local tobacco in that it gives distinct flavour, aroma and taste that enhances the quality of manufactured tobacco/blended cigarettes. On the other hand, locally-produced tobacco leaves particularly the Virginia variety are more suited as 'filler' rather than for 'flavour'. Imported tobacco therefore does not directly compete but rather complements domestically-produced tobacco.

Decreasing profit margins of farmers is not due to importation. It was raised that the declining profits

[2] The views of importers were also sought essentially to respond to the claim of local producers that increased importation is causing injury to the domestic industry. To get the views of onion importers, a meeting was held with representatives of known traders/importers' associations, namely: 1) Philippine Onion-Garlic Importers and Exporters, Inc. (POGIE); 2) Vegetable Importers/Exporters and Vendors Association of the Philippines (VIEVA Phils.); and 3) Philippine Vegetables Importers/Exporters Inc. (PVIEI). The views of tobacco importers meanwhile were those of the respondents to the farmers' petition for the imposition of safeguard measure including exporters, manufacturers and the National Tobacco Administration, a government agency overseeing the industry.

experienced by farmers are more likely due to the 'inappropriate/inefficient farming techniques and handling methods' that led to poor quality crop and erratic production. Importation of tobacco products is taken simply as the reaction of manufacturers and importers to insufficient supply of suitable tobacco varieties. A suggested solution was thus to develop the local tobacco industry to make it capable of supplying the quantity and quality demands of cigarette manufacturers.

1.4 Government's response

The Philippine government responds to protests and concerns of local industries regarding importation in the context of the present trade policy regime and based on the country's commitments/agreements with multilateral and regional trade organizations. For instance, in responding to petitions of onion and tobacco farmers for safeguard measures to abate adverse impact, if any, of increased importation, DA based its response and action on what are provided in the country's law on safeguards, i.e., Republic Act (R.A.) 8800 or the Safeguard Measures Act of 2000 which is consistent with the WTO Agreement on Agriculture. Specific responses of the government to onion and tobacco producers are discussed below.

Since onions is a commodity eligible for special safeguards, the DA evaluated the petition of local onion farmers following the provisions on the application of trigger price and trigger volume mechanisms specified in RA 8800. Soon after the DA established the trigger price of onions in 2002 and found that it was breached, or that the CIF import price of onions fell below its trigger price, *the government granted the petition of onion producers to impose additional tariff, in the form of a price-based SSG duty*. The initial imposition of the price-based special safeguards on onions became effective for only 1.5 months from 15 November 2002 to 31 December 2002 despite the breaching of the established trigger price. Prompted by the request of importers, the measure was lifted but mainly because there was an expected shortfall in supply of onions and that consumption requirements could not be met by domestic production alone. SSG duty on onions was imposed the second time from 18 December 2004 to 20 January 2005, when again farmers requested for its re-imposition. At present, no SSG duty is imposed on imported onions.

In the case of unmanufactured tobacco which is not eligible for the special safeguard measure, the DA invokes the provisions of the WTO AoA and RA 8800 related to the general safeguard measure in evaluating the petition of tobacco farmers. To date, the DA is conducting the preliminary investigation wherein the DA given available information, is required to establish that tobacco importation increased and that this is causing serious injury or threat of serious injury to the local industry.

Aside from the application of safeguard measure to address the local onion and tobacco farmers' concerns on increased importation, the government provides other assistance for their local produce to become competitive. The onion farmers (i.e. KASAMNE) for example were able to obtain financial assistance under the Agricultural Competitiveness Enhancement Fund (ACEF)[3]. The tobacco farmers meanwhile continue to receive support from the government through the National Tobacco Administration.

2. IMPORT SURGES

The occurrence of import surge during the period 1999-2004 for each case commodity is established using three methodologies: i) examining the trend in the volume of imports; ii) examining imports relative to consumption and production; and iii) comparing the volume and value of imports with the computed 'trigger volume and trigger price' respectively as defined in the WTO Agreement on Agriculture.

2.1 Establishing the surge in onion imports

Trend in the volume of onion imports

Up until 2004, onion imports were classified under one tariff line with HS Code 0703.1000[4] described as

[3] This is the fund where proceeds of the Minimum Access Volume (MAV) go for the use of the local industries to be more competitive in light of the country's commitments with the WTO.

[4] Onions and shallots are listed under "Chapter 7: Onions, shallots, garlic, leeks and other alliaceous vegetables, fresh or chilled" of the Philippines Tariff Classification and Customs Code (Executive Order No. 164, 10 January 2003, amending Presidential Decree No. 1464 of 1978).

onions and shallots, fresh or chilled. In 2004, this tariff line was broken into two, separating onions from shallots. Nonetheless, both types are lumped under one heading labeled as "*Onions, shallots, garlic, leeks and other alliaceous vegetables, fresh or chilled*".

During the years 1999-2004, the country's onion imports range from about seven (7) to 18 thousand metric tonnes or an average of about 12 thousand metric tonnes per annum. It can be noted from Figure 1 that the quantity of onion imports fluctuated and that yearly onion imports peaked in 2001. Moreover, sharp increases in the volume of imported onions were posted in 2001 (from 2000) and 2003 (from 2002).

On aggregate, the bulk or 60 percent of onion imports that entered the Philippines in the last six years came from the People's Republic of China (Table 2). The annual volume of onion imports from China ranged from a low of 1.6 thousand metric tonnes in the year 2000 to a high of close to 10.8 thousand metric tonnes in 2001. Over the same period, significant quantities of imported onions were also sourced from the Netherlands (16 percent) and Hong Kong (9 percent).

Onion imports relative to domestic consumption and production

On the average, onion imports constituted roughly eight (8) percent of total domestic consumption over the past six years. Using import's share of domestic consumption as a gauge of surge in imports, it can be noted from Table 3 that onion importation surged in 2001 and in 1999. During these two years, onion imports comprised 12 percent of domestic consumption, four percentage points higher than the mean share and three times as much as the smallest. In all the remaining years particularly from 2002-2004, import's share of consumption was significantly lower (Table 3).

For every one thousand kilos of onions produced domestically, there was on the average importation of 136 kilos onions, or roughly a ratio of 14 percent. Relative to local production, onions imports comprised a bigger portion in 2001 and in 1999.

Surge based on trigger levels of onion imports

Trigger volume and trigger price, as defined in the WTO Agreement on Agriculture (Article 5) particularly

FIGURE 1.
Volume of onion imports, 1999-2004

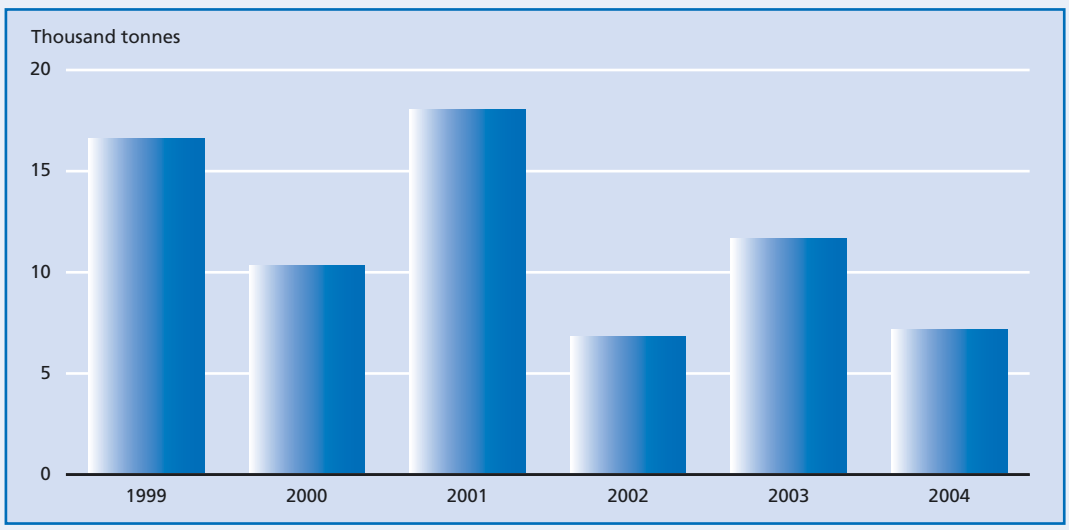


TABLE 2.
Volume of onion imports, by country of origin, 1999-2004 *(metric tonnes)*

Country of origin	1999	2000	2001	2002	2003	2004	1999-2004		
							Annual ave	*Total*	*% share*
Australia	100		169		117		128	385	0.5
Belgium	158		86	28		75	87	347	0.5
China	10 466	1 610	10 762	4 049	9 647	5 729	7 044	42 262	60.3
Hong Kong	415	4 231	964	601	193	52	1 076	6 456	9.2
India	21	230	456	739	84	9	256	1 539	2.2
Indonesia	63	21			331		138	415	0.6
Netherlands	2 404	2 452	3 570	1 012	749	1 177	1 894	11 364	16.2
New Zealand	1 403	340	461		38		560	2 242	3.2
Singapore	313	30	232	56			158	631	0.9
Taiwan	304	583	50		162	50	230	1 149	1.6
United States	859	554	787	33	154		477	2 387	3.4
Others [A]	25	200	389	233	109	-	640	957	1.4
Total	16 530	10 250	17 925	6 752	11 584	7 092	11 689	70 133	100.0

Source: National Statistics Office (NSO).
[a] Includes those country sources with total imports share of less than 0.5% each such as Canada, Japan, Malaysia, Germany, South Korea, Chile, Myanmar and United Kingdom of Great Britain & N. Ireland.

TABLE 3.
Volume of onion imports relative to domestic consumption and production

	1999	2000	2001	2002	2003	2004	Average
Volume of imports (mt)	16 530	10 250	17 925	6 752	11 584	7 092	11 689
Domestic consumption (mt)	138 409	149 822	143 075	156 542	175 945	174 011	156 301
Production (mt)	81 360	84 220	82 610	96 360	93 850	86 760	87 527
Import's share of consumption (%)	11.9	6.8	12.5	4.3	6.6	4.1	7.7
Ratio of imports to production (%)	20.3	12.2	21.7	7.0	12.3	8.2	13.6

Source of basic data: NSO and BAS.

the provisions under the special safeguard mechanism may also be used to indicate surge in onion imports. Two definitions of trigger volume levels are given, namely: (1) the sum of the average quantity of imports during the three preceding years for which data are available times a scaling factor (125 percent, 110 percent or 105 percent depending on the share of imports in domestic consumption) plus the absolute volume change in domestic consumption; and, (2) 125 percent of the average volume of imports in the three preceding years for which data are available. The computed trigger volumes of onion imports applicable for each year since 1999 are shown in Table 4. It can be noted that it was only in 2001 that the absolute quantity of onion imports exceeded its trigger volume (computed using the second formula) or that the trigger level was breached. Hence, it may be concluded that there was a surge in onion imports in 2001 based on the breaching of the volume-based trigger.

The other trigger mechanism is the price trigger computed as the average import (CIF) price of the eligible product during 1986 to 1988, if and when breached allows the importing country to impose additional special safeguard duty. For onions, the established trigger price is Php 74.21 per kilo while the CIF import price of onions in the last six years averaged at only USD 0.15 per kilo or, equivalently, Php 8.18 per kilo. Clearly the price-based trigger has always been breached. In fact the CIF price has been, on the average, 90 percent lower than the trigger price (Table 4).

2.2 Establishing the surge in tobacco imports

Trend in the volume of tobacco imports

The types of imported tobacco which are comparable to the domestic product fall under the tariff heading: *unmanufactured tobacco and tobacco refuse* (numbered 24.01). Unmanufactured tobacco imports are classified into three types: i) tobacco, not stemmed/stripped with further categorization

TABLE 4.
Volume of value of onion imports relative to triggers

	1999	2000	2001	2002	2003	2004
Volume of imports (in metric tonnes)	16 530	10 250	17 925	6 752	11 584	7 092
Trigger volume (in metric tonnes)						
Trigger volume 1 [a]	44 953	23 387	20 258	31 535	33 397	17 043
Trigger volume 2 [b]	5 603	11 974	15 353	18 068	13 994	15 109
CIF value of imports (in USD '000)	2 999	1 854	2 663	1 005	1 696	1 034
CIF unit value						
USD per kilo	0.18	0.18	0.15	0.15	0.15	0.15
Pesos per kilo	7.10	8.05	7.58	7.69	7.95	8.18
% higher/(lower) than the established trigger price of 74.21 pesos	(90)	(89)	(90)	(90)	(89)	(89)

[a] Using WTO definition i.e. the sum of the average quantity of imports during the three preceding years for which data are available times a scaling factor (125% 110% or 105% depending on the share of imports in domestic consumption) plus the absolute volume change in domestic consumption.

[b] An alternative WTO definition of trigger volume equal to 125% of the average volume of imports in the three preceding years for which data are available.

Source of basic data: NSO and BAS.

of whether or not it is of the Virginia variety or not; ii) tobacco, partly or wholly stemmed/stripped, also classified further as of the Virginia variety or not; and iii) tobacco refuse.[5] For purposes of this study, all these sub-types of tobacco will be aggregated to constitute 'tobacco imports'.

During the last six years, the average quantity of tobacco imported into the Philippines from all country sources was a little over 30 thousand metric tonnes per annum. About 95 percent of these were 'partly or wholly stemmed/stripped tobacco'. It can be noted from Table 5 and Figure 2 that tobacco imports was largest in 2004 when its total volume reached more than 57 thousand metric tonnes or roughly twice as much as the importation in the immediately preceding year.

[5] This categorization of unmanufactured tobacco and tobacco refuse (HS 24 01) took effect until 2004. In 2005, the following codes hold: i) HS 2401.20 10 -Virginia/Flue-cured tobacco; ii) HS 2401.20 40 – Burley; iii) HS 2401.20 30 – Oriental; iv) Stems – HS 2401.30 10; and v) Scraps - HS 2401.30 90. Since the analysis of import surge is for a period of five years up to 2004, this study uses the old categorization.

FIGURE 2.
Annual volume of tobacco imports, 1999-2004

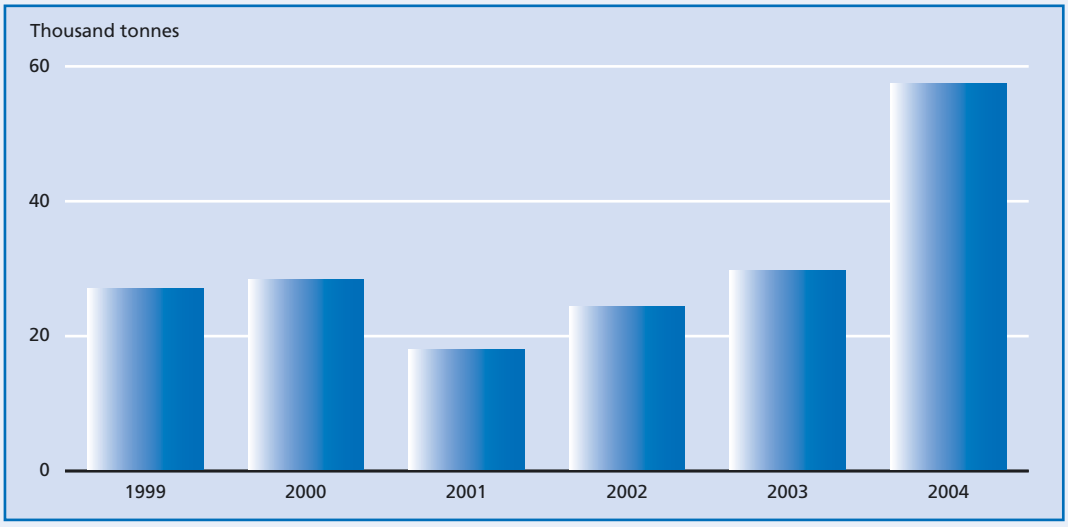


TABLE 5.
Volume of tobacco imports by type of tobacco, 1999-2004

	1999	2000	2001	2002	2003	2004	Average	
							Qty	*% share*
Tobacco not stemmed/ stripped	825	1 119	2 900	975	1 654	942	1 403	4.6
Tobacco partly or wholly stemmed/ stripped	25 964	27 007	14 823	23 068	26 734	55 989	28 931	94.6
Tobacco refuse	-	-	-	-	1 118	319	239	0.8
Total	26 790	28 126	17 723	24 043	29 506	57 250	30 573	100.0

Source: National Statistics Office (NSO).

The country's tobacco imports in the last six years came from 44 countries all over the world. The biggest quantity came from Brazil averaging at about ten thousand metric tonnes per annum and sharing close to 32 percent of total imports throughout the period. Tobacco imports from China and the United States of America were also significant, sharing about 22 percent and 9 percent of total, respectively. Quantities of tobacco imports from other countries are shown in Table 6.

Tobacco imports relative to domestic consumption and production

While the ratio of tobacco imports to production had always been significant (at least 37 percent), the quantity of tobacco imports had always been less than production until the year 2004 when imports exceeded domestic production by 18 percent (Table 7). It was also in the same year when import's share of domestic consumption increased significantly to 64 percent from 46 percent the previous year.

Surges based on trigger levels of tobacco imports

Comparing the absolute volume of tobacco imports to its volume triggers on a yearly basis since 1999, it can be noted that the volume of imports exceeded the computed trigger volume in 1999 and 2004 (Table 8). It can therefore be said that tobacco imports surged in those two years. Meanwhile, using the trigger price mechanism would not give any indication of the occurrence of surge in the importation of unmanufactured tobacco as its trigger price (based on CIF prices in 1986-88) was way below the annual CIF prices. But, applying the trigger price method only to 'tobacco not stemmed/stripped', it can be noted that there were indications of import surges of this particular tobacco product specifically in 1999, 2000, 2001, and 2002. Further, the price difference was at least 20 percent to at most 43 percent.

Summary on import surges

A surge in onion imports was established to have occurred in 2001 based on the volume of imports, both in absolute and relative terms, as well as on the breaching of the trigger levels. For tobacco imports, the year when imports surged was 2004, also based on the same indicators.

2.3 Factors inducing the surge

Import policy regime[6]

Trade policies instituted by the Philippines are aimed at shaping a more outward-oriented trade regime, further integration into the world economy and strengthened overseas market access for Philippine products. In pursuit of these objectives, the Philippines participates actively in multilateral and regional trade negotiations and keeps its commitments made with the WTO, the ASEAN Free Trade and the Asia Pacific Economic Cooperation. Tariff and non-tariff measures, established within the framework of these trade agreements, are viewed to have affected the country's importation particularly inducing surge in imports of agricultural products including onions and tobacco.

Tariff measures. Under the government's unilateral tariff program, the Philippines ensures that the WTO binding commitments are not breached in any process of tariff modification. In the WTO Uruguay Round, the Philippines bound 64 percent of 11 059 tariff lines at the 8-digit level: 97 percent of agricultural tariff lines and 57 percent of non-agricultural tariff lines. Bound rates range from zero percent to 80 percent though 60 percent are lower than 45 percent. In general bound rates exceed applied rates. The 2004 applied tariff rates ranged from zero percent to 65 percent. All applied tariffs are *ad valorem* applied on the CIF value of imports. The average applied MFN rate is 7.5 percent. In-quota tariff rates range from 20 to 50 percent while out-of-quota rates are generally five to 20 percentage points higher ranging from 25 to 65 percent.

As for all other imports, tariffs for onions and tobacco are *ad valorem* applied on the CIF value of imports. Onion imports were subjected to tariff quota until the year 2000 with the in-quota rate

[6] Sourced mainly from the Philippine government's submissions to the Trade Policy Review of the WTO in 2005.

TABLE 6.
Volume of tobacco imports by country of origin, 1999-2004 *(in metric tonnes)*

	1999	2000	2001	2002	2003	2004	Annual Average	Total 1999-2004	% share
Argentina	401	198		394		104	274.0	1 096.0	0.6
Australia		-	12			1 317	443.1	1 329.3	0.7
Belgium		42	148		644	764	399.3	1 597.3	0.9
Brazil	3 545	9 137	6 255	6 339	9 010	24 270	9 759.4	58 556.5	31.9
China	10 311	6 438	3 727	3 597	3 974	12 483	6 755.0	40 529.7	22.1
Hong Kong		12	6	535	450	150	230.8	1 153.8	0.6
India			127	632	350	873	495.4	1 981.6	1.1
Indonesia	1 462	1 564	665	2 297	1 921	3 001	1 818.5	10 911.1	5.9
Malawi	-	1 584	1 054	2 814	372	271	1 015.9	6 095.5	3.3
Malaysia	529	467	445	536	575	474	504.3	3 026.0	1.6
South Africa	1 963	552	575	495	1 208	2 435	1 204.6	7 227.7	3.9
Switzerland	-	20	40	368	1 913	4 060	1 066.8	6 400.9	3.5
Taiwan	2	-	554	465	631	147	300.0	1 800.2	1.0
Thailand	400	286	281	430	2 315	1 308	837.0	5 021.7	2.7
Turkey	197	91	136	224	1 833	1 943	737.2	4 423.0	2.4
United States	3 020	4 606	3 436	3 006	2 425	373	2 810.9	16 865.5	9.2
Vietnam					1 470	2 365	1 917.4	3 834.9	2.1
Zimbabwe	4 215	2 335	177	1 214		418	1 671.8	8 359.2	4.6
Others [a]	747	793	85	696	414	493	1 453.9	3 227.9	1.8
Total	26 790	28 126	17 723	24 043	29 506	57 250	30 572.9	183 437.6	100.0

[a] Includes those country sources with total imports share each of less than 0.5% such as Japan, Israel, Nicaragua, Hungary, Singapore, Canada, Bangladesh, France, Germany, Italy, Spain, United Kingdom, Albania, Greece, Netherlands, South Korea, Mexico, New Zealand, Sweden, Ireland, Uruguay, Cambodia, Malta, Saudi Arabia, Ecuador, Trinidad and Tobago.

Source: National Statistics Office (NSO).

TABLE 7.
Volume of tobacco imports relative to domestic consumption and production

	1999	2000	2001	2002	2003	2004	Average
Imports (mt)	26 790	28 126	17 723	24 043	29 506	57 250	30 573
Production (mt)	51 520	49 530	48 170	50 180	52 900	48 310	50 102
Consumption (mt)	58 911	48 740	35 491	58 447	64 906	89 038	59 256
Ratio of imports to production (%)	52.0	56.8	36.8	47.9	55.8	118.5	61.3
Import's share of consumption (%)	45.5	57.7	49.9	41.1	45.5	64.3	50.7

Source: NSO and BAS

TABLE 8.
Volume and value of tobacco imports relative to computed triggers

	1999	2000	2001	2002	2003	2004
Unmanufactured tobacco and tobacco refuse						
Volume of imports (mt)	26 790	28 126	17 723	24 043	29 506	57 250
Trigger volume (mt)						
Trigger volume 1[a]	21 115	33 296	38 535	48 379	30 921	49 077
Trigger volume 2[b]	21 945	27 530	30 103	30 266	29 122	29 697
CIF value of imports (in USD '000)	105 528	104 277	61 959	72 612	89 969	172 855
CIF unit value						
USD per kilo	3.94	3.71	3.50	3.02	3.05	3.02
Pesos per kilo	154.22	165.12	178.28	155.90	165.46	169.34
% higher/(lower) than computed trigger price of Php 93.97 pesos	64.12	75.71	89.72	66.54	78.26	79.91
Tobacco not stemmed/stripped						
CIF unit value in pesos per kilo	111.35	112.74	92.83	81.22	159.20	145.16
% higher/(lower) than computed trigger price of Php 141.72 pesos	(21.43)	(20.45)	(34.49)	(42.69)	12.33	2.43

[a] Using WTO definition, i.e., the sum of the average quantity of imports during the three preceding years for which data are available times a scaling factor (125%,110% or 105% depending on the share of imports in domestic consumption) plus the absolute volume change in domestic consumption.
[b] An alternative WTO definition of trigger volume equal to 125% of the average volume of imports in the three preceding years for which data are available.
Source of basic data: NSO and BAS.

of 30 percent while the out-quota rate was twice as much (60 percent). Since 2001 when the quota was eliminated, the applied tariff was reduced by 10 percent annually to reach its bound rate of 40 percent by 2003 (Table 9).

Meanwhile, the applied tariff rate for unmanufactured tobacco since 1999 has been much lower than its bound rate of 50 percent. The applied tariff of unmanufactured tobacco products during the period 1999 - 2000 was 20 percent, although leaf tobacco wrapper had lower tariff of ten percent. This went down to seven (7) percent in 2001 until to date.

Non-tariff measures. Non-tariff barriers to imports, such as the required licensing and permits, affect a number of goods. Import licensing is intended mainly to safeguard public health, national security and welfare, and to meet international treaty obligations related to the regulation of certain products.[7] Two different licensing procedures are in place: for non-quota products and for products subject to quotas. For non-quota products, the application has to be filed at least two weeks prior to the loading date and licenses are granted immediately. License fees vary according to product and are collected by the agency in charge of granting the license.

All importers are required to register with the Customs Intelligence and Investigation Service of the Bureau of Customs (BOC). In addition, to be allowed to import agricultural products, importers need to be accredited with the designated government agency. The Bureau of Plant Industry (BPI) is the government agency that accredits importers of most plants and plant products including onions. Tobacco importers meanwhile get accreditation and commodity clearance from the National Tobacco Administration (NTA). There are no fees for such accreditation. 6Certain national standards also have to be met by imports. For agricultural food products, standard qualities are formulated by the Bureau of Agriculture and Fisheries Product Standards (BAFPS). Onion imports in particular have to comply with a new set of Philippine national standards for 'bulb onions' prepared by the Bureau of Agriculture and Fisheries Product Standards (BAFPS) in 2003.[8]

[7] The import licensing regime is regulated by the Tariff and Customs Code of 1978 (PD 1464), and by other laws that govern the importation and licensing regime of specific commodities.

TABLE 9.
Tariff schedule of onions and tobacco, 1999-2004

HS Code	Description	1999	2000	2001	2002	2003	2004	
							MFN	CEPT
0703.1000	Onions and shallots, fresh or chilled							
	In quota	30	30	60	50	40	40	5
	Out-quota	60	60					
2401.1000	Tobacco, not stemmed/stripped			10	7	7	7	3
	Leaf tobacco wrapper	10	10					
	Other	20	20					
2401.2000	Tobacco, partly or wholly stemmed/ stripped	20	20	10	7	7	7	3
2401.3000	Tobacco refuse	20	20	10	7	7	7	3

MFN- Most Favored Nation; CEPT – Common Effective Preferential Tariff under the ASEAN Agreement.
Source: Tariff and Customs Code of the Philippines.

On the other hand, the National Tobacco Administration (NTA) has formulated official grades and specifications of locally-grown tobacco but essentially to guide farmers on the types of tobacco leaves suited for manufacturing. However, standards with regard to the suitable quality of tobacco have yet to be formulated.

Other potential factors inducing the surge

Other factors that might have induced the surge or increase in the importation of onions and tobacco are explored here.

Exchange Rate. Since 1999, the Philippine peso to US dollar exchange rate has been depreciating at an average rate of about eight percent per annum (Table 10). In 2001 when there was a surge in onion imports, the exchange rate was almost P51 to the dollar, from an average of P45 to $1 the previous year of a depreciation of the peso by 14 percent. This means that imports are more expensive in 2001 than in 2000. Meanwhile, the peso to dollar exchange rate in 2004 when tobacco imports surged was P56, the lowest during the review period so that imports are even more expensive. Hence, the peso to dollar exchange rate could not be a key factor that caused the surge in imports in both onions and tobacco.

Adverse weather condition which led to the decline in onion production. It can be noted that the production of local onions in 2001 was lower by 1.6 million kilos compared to the production during the previous year. From 84.2 million kilos in 2001, total production of onions was only 82.6 million kilos in 2002. The decrease in production was mainly attributed to too much rainfall during the cropping period. Thus, adverse weather condition which resulted in low onion production (which is usually known during the March to April of the year) can be considered to have induced, albeit indirectly, a bigger volume of importation.

Deteriorating soil condition affected tobacco production. Likewise, tobacco production declined significantly as imports surged in 2004 compared to the previous-year level. The main reason for the decrease is that farmers reportedly reduced land planted to tobacco and/or shifted to other crops due to high soil salinity. In fact, total area planted to tobacco decreased by 19 percent that is, from 41 700 hectares in 2003 to only 33 800 hectares in 2004. The deteriorating soil condition caused the production of poor quality tobacco—with high salt content which traders refused to buy. Some farmers reportedly shifted to corn, cassava, tomato or legumes. Another reason cited for decreased production was the low buying price of tobacco during the previous season.

[8] In formulating the new standards, BAFPS was assisted by a technical committee of government and private sector representatives. Earlier standards (1969 Bulb Onion Standards and 1982 Standards the National Food Authority) were used as reference. BAFPS also conducted a series of technical reviews and public consultations before the standards were finalized.

TABLE 10.
Exchange rate, 1999-2004

	1999	2000	2001	2002	2003	2004
Peso equivalent of one USD	39.1513	44.5363	50.9948	51.6212	54.2615	56.0866
% depreciation		13.75	14.50	1.23	5.11	3.36

Source of basic data: NSO and BAS.

3. INJURY ANALYSIS

3.1 Product and market characteristics

Locally-produced onions versus imported onions

Physical attributes. Local onion farmers emphasize the physical qualities of their produce that are distinct from imported onions. Locally-grown onions of the red variety are round reddish in color and their skin/peeling can be removed easily whereas imported red onions have a pale or lighter red color and somewhat elongated in shape. Meanwhile, local "white/yellow" onions have meat that is softer/more tender, more aromatic and juicier than imported ones whose meat is yellowish, rather than white, in color. Local onions also come in different sizes, such as, small ('pickles'), good/medium, and oversized, compared to imports which are mostly bigger (considered 'oversized').

Onions are reportedly sensitive to the type of soil and weather, e.g., too much sun stunts its growth. Seasonality of onion is also a problem for the farmers in the Philippines. Importers cited that in China, onions are planted mostly throughout the year, whereas in the country, onions are planted only during November to December. This could explain the fact that local production is much lower than demand for onions. Moreover, importers cited that local onions have shorter shelf-life than imported ones.

Markets. The main buyers of domestically-produced onions are local traders who buy in bulk or on a wholesale basis at the farms or at the local trading centers. Farmers cited that traders-importers offer to buy their produce before or even during planting season but seldom actually do when harvest time comes. Importers, on the other hand, contend that it is difficult for them to 'penetrate' the local farmers' market because this is controlled by local traders. It has been observed that farmers usually borrow money from traders/input suppliers to and part of the loan agreement is the sale of their onion harvest to the trader-lender. Local traders usually bring the onions in markets and groceries in the urban centers.

According to importers, hotels and restaurants are the main buyers of onion imports particularly those coming from the Netherlands. They further cited that about half (50 percent) of the total volume of onion imports are bought and consumed by hotels, 25 percent goes to supermarkets and groceries in urban centers and the rest (25 percent) to the different local markets around the country. Thus, imported onions compete with the local produce in the retail markets

FIGURE 3.
Markets for local and imported onions

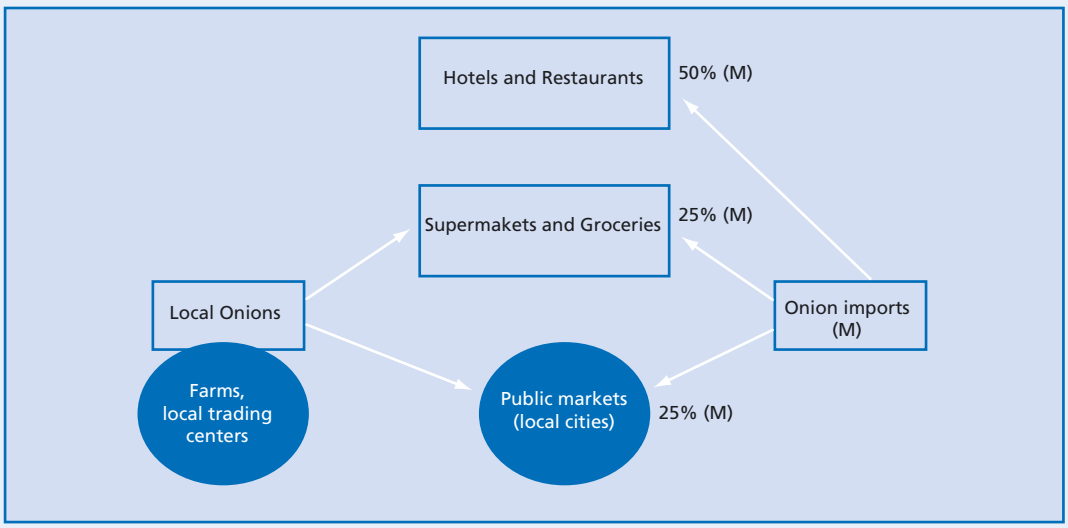
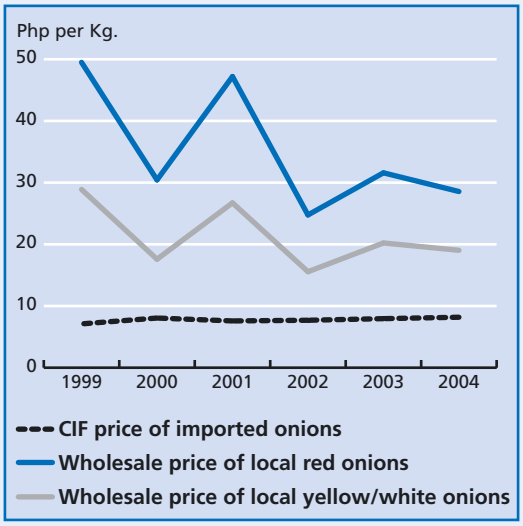


FIGURE 4.
Prices of imported versus local onions, 1999-2004



such as the community markets, private supermarkets and groceries in urban centers nationwide.

Prices of imported versus local onions. Figure 4 and Table 11 present the average annual CIF import prices of onions alongside the wholesale prices of local onions over the period 1999-2004, in local currency (Philippine pesos or Php) per kilo. On average, the CIF import prices of onions were much lower than the wholesale prices of either the red or yellow/ onions produced domestically. As can be noted from Table 11, wholesale prices of yellow or white onions were three times as high as the landed (CIF) price of imported onions. The gap is even wider (five times as much) if we compare the price of locally-produced red *creole* onions with the landed price of imported onions. On a yearly basis, the biggest difference between CIF import prices and wholesale prices of local onions was posted in 1999, and then in 2001, when locally-produced onions were 253% to 597% more expensive. It can be recalled that it was in 2001 that there was a surge in onion imports.

Prices of local onions in different markets. Prices of local onions at the farmgate, as well as in the wholesale and retail markets have declined significantly over the period 1999-2004 (Table 12). Farmgate prices in 2004 were just roughly one-third of prices in 1999. Meanwhile, the decline in prices of onions at the wholesale market was even greater, placing the average wholesale prices of onions in 2004 to less than half of the prices in 1999. Retail prices also went down significantly. The gaps in the prices of onions in the different markets are indicative of the transactions costs incurred in bringing the local produce from one market to another. Table 12 also presents the differences in prices from the farmgate to

TABLE 11.
Prices of imported versus local onions *(in pesos/kg)*

	1999	2000	2001	2002	2003	2004	Average
Landed price of imported onions – CIF in local currency (Php per kilo)	7.10	8.05	7.58	7.69	7.95	8.18	7.76
Wholesale prices of local onions							
Onion red creole, Bermuda	49.50	30.44	47.20	24.76	31.59	28.56	35.34
Onion white, yellow granex	28.90	17.58	26.72	15.56	20.22	19.03	21.34
Peso difference							
Onion red creole, Bermuda	42.40	22.39	39.62	17.07	23.64	20.38	27.58
Onion white, yellow granex	21.80	9.53	19.14	7.87	12.27	10.85	13.58
% difference							
Onion red creole, Bermuda	597.00	277.97	522.91	222.11	297.60	249.13	361.12
Onion white, yellow granex	306.94	118.29	252.63	102.43	154.49	132.63	177.90

the wholesale market and from the wholesale to the retail market. It can be noted that the gap between the wholesale and retail prices during the same period were on the average narrower than the difference between the wholesale prices and farmgate prices of local onions suggesting higher transactions costs in bringing the goods from the farm to the wholesale market.

Prices of imported onions in the local market. While the landed or CIF prices of imported onions over the same years 1999-2004, were somewhat stable, onion prices at the retail level had been declining. Hence, the gap between retail prices and landed prices (considered wholesale prices) had been narrowing (Table 13). It can be further noted that the margin between the prices of imported onions in the retail market and its CIF import prices were a lot bigger than the margin between the prices of locally-produced onions in the retail and the wholesale markets (Tables 12 and 13). On average, the retail prices of yellow granex onions in particular were higher than its import prices by a margin which ranged from 295 to 596 percent, while that of domestically-produced onions ranged from 66 to 95 percent.

Local tobacco versus imported tobacco

The different types of unmanufactured tobacco available in the country, their description and specific

TABLE 12.
Prices of locally-produced onions in different markets, 1999-2004 *(in pesos/kg)*

	1999	2000	2001	2002	2003	2004
Farmgate prices						
Onion native (red shallots)	37.30	16.00	20.23	13.39	15.12	14.53
Onion red creole, Bermuda	38.86	10.16	22.07	13.82	13.54	15.48
Onion white, yellow granex	27.46	7.15	11.67	8.58	8.72	8.11
Wholesale prices						
Onion native (red shallots)	54.39	23.38	33.85	21.76	30.69	24.67
Onion red creole, Bermuda	49.50	30.44	47.20	24.76	31.59	28.56
Onion white, yellow granex	28.90	17.58	26.72	15.56	20.22	19.03
Retail prices						
Onion red creole, Bermuda	65.93	43.14	61.10	37.91	43.24	39.99
Onion white, yellow granex	47.97	34.05	44.86	30.34	34.01	33.00
% Difference/Higher: Wholesale - Farmgate Prices						
Onion native (red shallots)	45.8	46.1	67.3	62.5	103.0	69.8
Onion red creole, Bermuda	27.4	199.6	113.9	79.2	133.3	84.5
Onion white, yellow granex	5.2	145.9	129.0	81.4	131.9	134.6
% Difference/Higher: Retail - Wholesale Prices						
Onion red creole, Bermuda	33.2	41.7	29.4	53.1	36.9	40.0
Onion white, yellow granex	66.0	93.7	67.9	95.0	68.2	73.4

TABLE 13.
Prices of imported onions in different markets, 1999-2004 *(in pesos/kg)*

	1999	2000	2001	2002	2003	2004
Landed price of imported onions - CIF in local currency (Php/kilo)	7.10	8.05	7.58	7.69	7.95	8.18
Retail prices						
Onion red creole, Bermuda	65.93	43.14	61.10	37.91	43.24	39.99
Onion white, yellow granex	47.97	34.05	44.86	30.34	34.01	33.00
% Difference/Higher: Retail – CIF Import Prices						
Onion red creole, Bermuda	828.3	435.7	706.4	393.2	444.2	388.9
Onion white, yellow granex	575.5	322.8	492.0	294.7	328.1	303.4

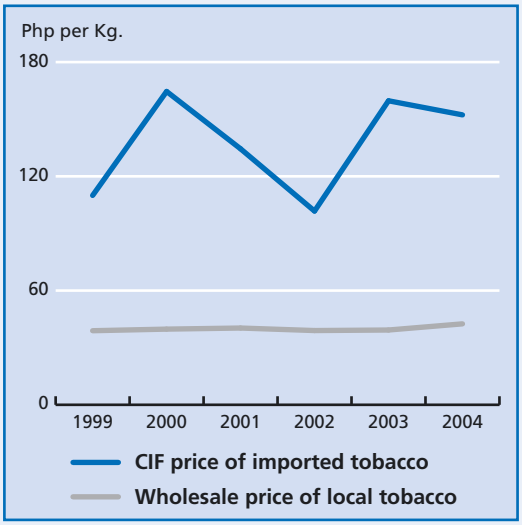
uses are specified in Table 14. All these are grown in the country in significant quantities except for Oriental/Turkish variety. Domestic production of tobacco starts in September when tobacco seeds are bedded for about 70 days. In November, these seeds are transplanted. Harvesting, which is done weekly depending on maturity of the leaves and the tobacco variety, is done in the months of January to May. Harvesting period for Virginia is usually in January, for Burley in February/March and native tobacco in April/May. Tobacco is a storable commodity and can be stocked for at least eight years. The quality of tobacco in fact improves as it ages. Moreover, available processing technology allows for the blending of different types, maturities/ages and qualities of tobacco.

Local tobacco varieties are different from imported varieties asserts a leading manufacturer in its response to the petition for safeguards of PATCO. The principal difference cited is that local tobacco are more suited as 'fillers' rather than for flavouring. Thus, this manufacturer imports all the tobacco it uses for flavouring. It was further argued that even if the same variety of tobacco is produced domestically, say, the Virginia type, there can be differences in flavour as a result of weather and soil conditions, the farming techniques and handling methods employed. Ideal weather is also crucial since it affects the supply of water and humidity, two of the most important factors that affect the quality of tobacco produced. As was mentioned, tobacco can be grown only in one cycle per year and it is best planted during the end of the rainy season, in order to ensure adequate moisture in the soil while avoiding damaging excessive rains. For optimum flavour and quality, experts say that it must receive approximately 10 inches of rain at the proper time.

Prices of imported versus local tobacco. Imported tobacco particularly the Virginia variety had been more expensive than the domestically-produced Virginia tobacco. In the last six years, imported Virginia were roughly two times more expensive than those produced by local tobacco farmers (Figure 5 and Table 15). Most of the tobacco leaves produced domestically are used for the manufacture of cigars and cigarettes. By and large, therefore, tobacco produce goes to the wholesale market where traders buy from farmers and sell to tobacco manufacturers. During the period 1999-2004, Virginia and Burley tobacco leaves have stable wholesale prices, increasing very slightly, at an annual average of three and one percent, respectively (Table 15).

The stability in prices could be because 'prices' of local tobacco are somewhat negotiated/agreed between tobacco farmers and traders/manufacturers. Every two years, a tripartite conference is held among farmers, manufacturers and government (represented by NTA) where the parties agree to a floor price for tobacco leaf. The last conference was held in August 2005 attended by farmers, traders and cigarette

FIGURE 5.
Prices of imported versus local (Virginia) tobacco, 1999-2004



manufacturers. During this last conference, the floor price of flue-cured Virginia tobacco was increased by Php 3.50 per kilo across all grades while the floor price of Burley was up by Php 3.00 per kilo across all grades. In the earlier tripartite meetings, floor prices were raised by only Php 1.00 or Php 1.50. The agreed floor prices and the actual average tobacco prices over the period 1999 to 2004 are given in Table 15. It can be noted that, the prices at which local tobacco were actually bought were invariably higher than the agreed minimum price. However, it should also be noted that the prices were actually fluctuating and even went down in the last two years. The given reason for the decline in the buying price particularly in 2003 was the poor quality or high salt content of the produce.

3.2 Injury experienced by the local industry

Onions and tobacco farmers reportedly have experienced injuries in the past six years, foremost

TABLE 14.
Types of tobacco grown in the Philippines and uses

Variety/ type	Class	Description	Uses
Virginia	Flue-cured	Light brown in color and with pleasant aroma; "bright" tobacco cured by indirect heat/ process of regulating heat and ventilation inside a curing barn	In cigarettes, either alone or as part of an American blend, and in light pipe tobacco; Categorized as either 'filler' or 'flavour'
	Air-cured	Known as Virginia sun-cured; may be light or dark brown in color	Cigarettes and pipe tobaccos
	Fire-cured	Dark brown in color; also called Virginia-dark cured	In snuff, chewing tobacco and pipe mixtures
Burley	Air-cured	A main type of air-cured tobacco identified by its light brown to dark brown/deep-reddish brown in color, robust aroma, and distinctive smoking character characterized by very low or non-detectable sugar levels	Important in the production of blended cigarettes (along with flue-cured Virginia and Oriental tobaccos)
Native	Air-cured	Dark air-cured tobacco	Used as filler for all factory and homemade manufactured cigars, cheroots and native cigarettes; Used as cigar wrapper, binder and for chewing
Oriental/ Turkish	Sun-cured	Small greenish to brown leaves cured directly under the sun	Provides distinctive flavour and aroma and sweet taste to cigarettes; also enhances burning quality

Source: PATCO and PMPI

of which are: i) decreased volume of sales; ii) low prices of produce; iii) decreased incomes/ profits; iv) underutilized capacity; and v) decreased employment. These injuries, together with some evidence and supporting data, albeit very limited, were expressed by onion farmers in various consultation meetings while those experienced by the tobacco farmers are those stated in its petition for safeguards.

Decreased volume of sales and production

Tobacco farmers claimed that, in recent years, the quantities of tobacco produce that they were able to sell had decreased significantly. Moreover, in 2004, farmers had difficulty selling 12 million kilos of their tobacco inventory valued at Php 220 million (equivalent to USD 3.9 million). Indeed, in absolute terms, the quantity of tobacco sold decreased significantly, by 38 percent in 2004 from 2003. However, this reported total sales was all that can be possibly sold, that is, practically all of the tobacco produced during the year 2004 were bought by the traders and manufacturers. Total volume of tobacco sales in terms of the proportion to the quantity produced was in fact increasing steadily since 1999 (Table 17). This could mean therefore that there was low volume of sales because production was low. It was gathered that production went down significantly in 2004 because: i) of high salinity of soil not suited to tobacco farming which led to the decrease in area planted to tobacco; ii) closure of tobacco operations in Mindanao due mainly to peace and order situation; iii) the buying price offered at the start of the planting season which constrained farmers to produce only 50 million kilos instead of the usual 80 million kilos; and iv) high inventory kept by cigar/cigarette manufacturers.

Low prices of produce

Onion farmers experienced significant lowering of prices of their produce. Data show that farmgate prices of onions declined significantly since 2000 compared to farmgate prices producers received in 1999 (Table 18). Farmgate prices of all types of onions starting 2000 decreased to only about a third of the prices in 1999. By type of domestically-produced onions, the cut is even bigger in the farmgate prices of white or yellow granex onions, with the percentage decline reaching 77 percent.

Decreased income and profit

Decreasing volume of tobacco sales and significant lowering of prices in the case of onions resulted in significant declines in the net income of tobacco and onion farmers, respectively. Net profits of tobacco farmers decreased substantially from 1999, not only in absolute terms, but also in relation to total sales and cost of production (Table 19). The reported net income of farmers decreased by 31 percent from P7.45 per kilo in 1999 to P5.13 per kilo in 2004. Over the same period, farmers' profit per peso of cost of production was also reduced from 34 percent to 18 percent. The biggest drop in profits was experienced by farmers in 2000.

Meanwhile, profits from onion farming appears to also have declined over the review period as farmgate prices declined significantly while the cost of production, particularly the cost of inputs, increased/ did not decrease. The cost of onion production in 2005 was estimated at Php 80 900 (or equivalent to USD 1 466) per hectare, of which 44 percent are the cost of inputs. It was estimated that net profit generated from onion production for 2005 was roughly Php 35 000 (USD 634).

Underutilized capacity

Tobacco farmers also claimed that they used to produce 80 million kilos of tobacco particularly in the years 2002-2003. However, due to the low buying price and the seeming 'refusal' of cigarette manufacturers to buy their produce, farmers were constrained to produce only 50 million kilos in the year 2004.

Decreased employment

Another impact of increased importation cited by both onion and tobacco farmers is decreased employment in the industry. This is not only among farmers but also among farm labourers and haulers. However, there are no data to support this claim by farmers.

TABLE 15.
Prices of imported versus local tobacco *(pesos/kilo)*

	1999	2000	2001	2002	2003	2004
Landed price of imported tobacco - CIF in local currency (Php per kilo)						
Virginia	109.96	164.58	134.45	101.75	159.68	152.28
Other	166.01	165.45	197.38	170.26	170.77	172.77
Tobacco refuse					157.95	162.88
Wholesale/buying prices of local tobacco						
Native tobacco, dry [a]	15.60	23.04	35.45	27.62	24.07	25.59
Virginia	38.91	39.75	40.32	39.00	39.28	42.52
Burley [a]	35.09	33.02	35.65	36.88	30.30	34.93
Difference in price of imported and local Virginia tobacco						
Peso difference	-71.05	-124.83	-94.13	-62.75	-120.40	-109.76
% difference	-64.61	-75.85	-70.01	-61.67	-75.40	-72.08

[a] Average buying prices as reported by PATCO while wholesale prices of Virginia tobacco were from the BAS.

TABLE 16.
Prices of local tobacco versus agreed floor prices *(in pesos/kg)*

	1999	2000	2001	2002	2003	2004
Agreed floor price/NTA price	29.41	33.48	33.63	34.87	32.45	32.01
Actual price (average)	34.17	36.88	39.69	41.73	36.68	37.50
Difference, absolute terms (in Php)	4.76	3.40	6.06	6.86	4.23	5.49
Difference, percentage	16	10	18	20	13	17

Source of basic data: NTA 2004 Annual Report

TABLE 17.
Prices of local tobacco versus agreed floor prices *(in pesos/kg)*

	1999	2000	2001	2002	2003	2004	Ave Annual inc/dec	
							1999-2004	2003-2004
Volume of production (mt)	67 045	75 189	68 695	80 063	81 361	50 179	14%	-38%
Volume of sales (mt)	62 383	71 533	65 539	79 198	80 372	50 178	21%	-38%
Volume of unsold tobacco (mt)	4 662	3 656	3 156	865	989	1	-113%	-100%
Percentage of sales	93	95	95	99	99	100		

Source: PATCO submissions

TABLE 18.
Farmgate prices of locally-produced onions, 1999-2004 *(pesos/kg)*

	1999	2000	2001	2002	2003	2004
Onion native (red shallots)	37.30	16.00	20.23	13.39	15.12	14.53
% Increase/decrease from previous year		-57	26	-34	13	-4
% Decrease from 1999		-68	-41	-61	-56	-58
Onion red creole, Bermuda	38.86	10.16	22.07	13.82	13.54	15.48
% Increase/decrease from previous year		-74	117	-37	-2	14
% Decrease from 1999		-68	-36	-60	-61	-55
Onion white, yellow granex	27.46	7.15	11.67	8.58	8.72	8.11
% Increase/decrease from previous year		-74	63	-26	2	-7
% Decrease from 1999		-68	-66	-75	-75	-77
All onion types (Pesos/kilo)	34.54	11.10	17.99	11.93	12.46	12.71
% Increase/decrease from previous year		-68	62	-34	4	2
% Decrease from 1999		-68	-48	-65	-64	-63

Source: Price data from BAS.

TABLE 19.
Profits from tobacco production

	1999	2000	2001	2002	2003	2004
Selling price per unit (pesos/kg)	29.46	32.97	38.14	38.03	33.03	34.42
Cost per unit (pesos/kg)	22.01	29.99	31.91	30.96	28.51	29.29
Net profit per unit (pesos/kg)	7.45	2.98	6.23	7.07	4.52	5.13
% Increase/decrease from previous year		-60	109	13	-36	13
% Decrease from 1999		-60	-16	-5	-39	-31
Sales (P'000)	2 131 746	2 637 956	2 610 789	3 304 730	2 948 381	1 873 163
Gross income (P'000)	1 526 826	2 412 358	2 376 742	2 673 240	2 566 809	1 685 276
Net profit (P'000)	604 920	225 597	234 047	631 490	381 572	187 888
% Increase/decrease from previous year		-63	4	170	-40	-51
Decrease from 1999		-60%	-61%	4%	-37%	-69%
Profit in percent of sales	28%	9%	9%	19%	13%	10%
Profit per peso of cost	34%	10%	20%	23%	16%	18%

Source of basic data: PATCO submission

Other injuries

Because of the low profits or net cash flows generated by the tobacco industry and in particular PATCO, it disclosed that it has difficulty coping with increasing capital for investment and modernization. The industry could not also provide for research and development. Also, if importation continues to increase, PATCO expressed concern that in no time, the tobacco industry, which has been providing the national government Php 23 billion revenue would be dead. Tobacco farmers then would be dependent on government for support. Onion farmers expressed the same fear that the onion industry would die and might result in unrest.

4. CAUSALITY AND NON-ATTRIBUTION FACTORS

4.1 Causal link between imports and injury to the industry

A key element of analyzing the impact of importation is establishing whether or not the injuries experienced by the domestic industry, in this case onions and tobacco, are caused by the import surge. This is done in this report through correlation analysis and time series analysis[9] between imports and the main injury for which data are available. Correlation, if any, is determined between i) onion importation and farmgate prices and ii) tobacco importation and volume of production/sales.

Increased/cheap importation and low farmgate prices

The significant lowering of prices of domestically-produced onions has been attributed by farmers to the surge in imports particularly to 'cheap' onion imports. However, this is not supported by official data on farmgate prices and the quantities of onion importation. As shown in Figure 6, the decline in the average farmgate prices starting 2000 (and a further decline in 2002) appears not to be correlated with increased in importation. In fact there was also a decline in the volume of importation during the period.[10] Meanwhile, the trend in the volume of onions produced locally seems to explain the movements in farmgate prices as shown also in Figure 6. Low farmgate price appears to be associated with high volume of production. In particular, when there was a sharp decline in farmgate price in 2000, and then in 2002, there was also a corresponding increase in the quantity of production during these years.

It should be noted however that the (CIF) prices of imported onions as discussed earlier (see Figure 4) were so low that it could have dampened prices (buying/farmgate prices) of local onions. This is confirmed by correlation analysis that showed that lower import prices tend to cause lower domestic prices.

Increased importation and low sales/production

By observation, there seems to be no negative correlation between the volume of tobacco importation and domestic production or sales (Figure 7). On the contrary, they appear to be positively correlated as higher (lower) imports is associated with higher (lower) production/sales from 1999 to 2003. It was only in 2004 when they moved in opposite direction—imports swelled as production and sales dropped. Indeed, the correlation and time series analysis done by Rodriguez (FAO, 2006) do not find compelling evidence of a negative relationship between imports and domestic production of tobacco. Rodriguez concluded that while the correlation analysis shows that there is a negative association between the domestic production and

[9] The graphical 'correlation' analysis employed in this paper are validated by the results of the correlation and time series analysis done by U-Primo E. Rodriquez under the same project of the FAO, that aims to develop a framework for determining the impact of an import surge in the Philippine economy.

[10] There were reports of onion imports entering the country illegally through various ports which could explain the observed flooding of markets with imported onions. For instance, on September 29, 2004, newspaper reports stated that the Bureau of Customs seized 22 container vans loaded with illegal shipment of onions, mixed with carrots worth 18 million pesos. There is however no data available on the volume of apprehended/recorded smuggled onion imports which can be included in the analysis.

FIGURE 6.
Quantities of onion production and imports versus farmgate prices, 1999-2004

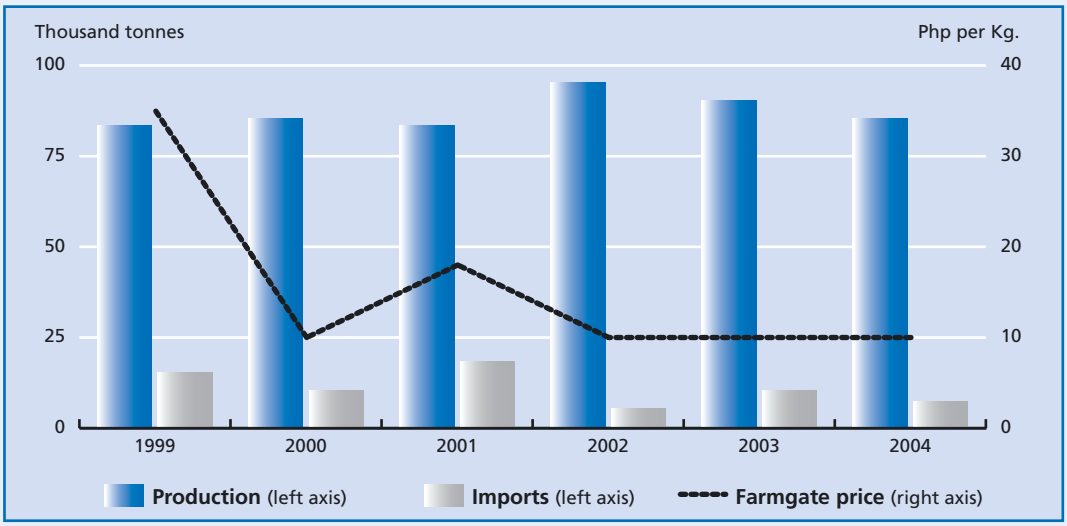
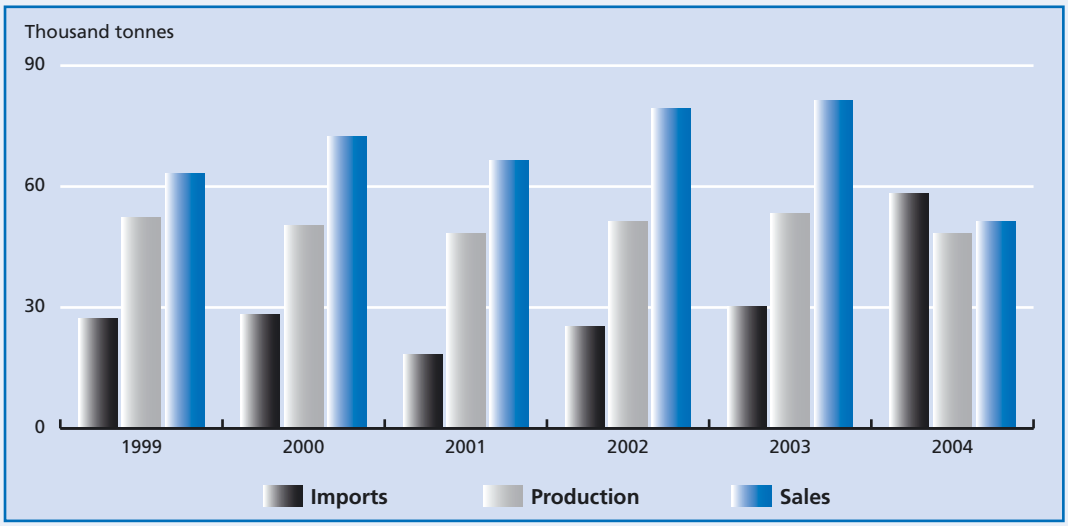


FIGURE 7.
Volume of tobacco imports versus production and sales, 1999-2004



imports lagged by 2 to 2.5 years, it is not clear whether this is convincing since earlier lags show positive relationship.

4.2 Other factors affecting the local industry

There are factors other than importation that might have caused, directly/indirectly, or aggravate the injury/ies experienced by the domestic onion and tobacco industries. These factors which largely affect the local industries' competitiveness, are briefly discussed below.

Increased cost of production

Tobacco and onion farmers cited the rising cost of production particularly the cost of inputs such as fertilizers and pesticides during the period 1999-2004. For tobacco, this was reportedly at the rate of eight percent per annum (Table 20). The increase was estimated to be even bigger from 2003-2004 placed at 25 percent. On a per hectare basis, the total cost of producing Virginia tobacco for instance increased from roughly 80 thousand pesos in 2003 to a little over 99 thousand pesos in 2004. Meanwhile, the cost per hectare of producing Burley tobacco in 2004 was placed at over 72 thousand pesos and native tobacco by much smaller amount of over 42 thousand pesos.

Meanwhile, the estimated cost of onion production for 2005 was placed at Php 80 900 (or equivalent to USD 1 466) per hectare. The cost of farm inputs comprised 44 percent of the total cost. With the increased cost of production, not all onion farmers reportedly were able to finance their own production. They would rather be employed by other farmers who are still able to finance their own production.

Poor quality of produce

Tobacco farmers were told that the main reason for the low sales that they experienced was that, not all of the tobacco they produced had the quality that traders and manufacturers were looking for. NTA reports that manufacturers suddenly decided not to buy the low grade, salty and off-type variety ('saplak', midway between Burley and native) tobacco they used to buy. Farmers however maintain that they were not told what quality the traders and manufacturers specifically wanted. Besides they reportedly observed that importers are also importing low grade tobacco.

The NTA meanwhile has been promoting a Tobacco Contract Growing System among producers to help them grow quality tobacco. NTA has reportedly discouraged farmers from planting *'saplak'* which affects the burning quality of tobacco. Among other measures, the NTA is also urging the tobacco farmers to shift to genuine Burley tobacco and modernize their production.

Lack of storage facilities

Only a few farmers keep onion stocks because most do not have proper storage facilities. Some tobacco farmers have traditional or backyard storages to stock their surplus. To most farmers, using storage facilities available in their communities are expensive.

TABLE 20
Cost of production *(pesos/hectare)*

Type of tobacco	1999	2000	2001	2002	2003	2004	Ave annual inc/dec
Virginia	69 181	71 810	74 439	77 068	79 697	99 484	8%
Burley	49 831	51 725	54 777	56 749	57 884	72 355	8%
Native	28 465	29 547	31 290	33 136	33 799	42 249	9%

Source: PATCO submission.

Most farmers if ever they store their onion products, do so only until June, two to three months after harvest, as they need money to spend on their children's school expenses. Farmers wish that traders buy during harvest time, not later when farmers are forced to lower their prices rather than have their onion produce go to waste.

Need for new technology to adopt to varying consumer preferences

It was cited by traders-importers that onion farmers must learn new technology or new ways of planting onions and to produce varying types to cater to consumers' different preferences. To cite a model, importers shared their impression on China's farming practices with those of the Philippines. In particular they refer to China's "mass production" technique which allows them to achieve economies of scale and save on production cost. Much larger areas are planted to onions in China compared to the land devoted to onions in the country. As to variety, larger varieties of onions are planted in China while much smaller type of onions is planted by Filipino farmers.

Poor handling and transporting of onion produce

Traders and importers observed that onion farmers need to be assisted in terms of handling and marketing their onion produce. The poor handling of onions lead to wastage. They also suggested the need to open/improve more farm-to-market roads.

Lack of training, production and marketing assistance

In order to be competitive in the face of increasing tobacco imports, farmers expressed the need for training on technology and assistance in directly marketing their produce including access to the export market. They also cited the lack of financial support for production and expressed concern that the Land Bank of the Philippines, the government-owned bank mandated to lend to farmers, has very stringent requirements so they have difficulty loaning money.

4.3 Trade surveillance

Government institutions involved in trade monitoring

Some 26 government agencies/bureaus/offices are involved in trade-related functions such as trade policy formulation and implementation including monitoring of trade flows. These agencies belong to six departments namely: Office of the President, Department of Trade and Industry, Department of Finance, Department of Agriculture, Department of Tourism and the *Bangko Sentral ng Pilipinas* (or Central Bank of the Philippines). The main functions of each of these institutions related to trade are specified in Annex A.

With respect to trade monitoring and implementation of trade remedy measures for the agriculture sector, the main organizations involved include those in the Department of Agriculture (DA), the Bureau of Customs (BOC), the Tariff Commission (TC) and the National Statistics Office (NSO), both under the National Economic Development Authority of the Office of the President (Table 21). The DA houses eleven offices/organizations which perform trade-related functions other than policy formulation, Aside from the Bureau of Plant Industry, the Bureau of Animal Industry, the Bureau of Fisheries and Aquatic Resources, which administer quarantine and inspection services for, respectively, all plants, all animals, and fisheries, there are special agencies (specific bureaus) that serve/monitor specific commodity/industry sector: rice, sugar, coconut and tobacco. There is also the Bureau of Agricultural and Fisheries Product Standards which sets and implements standards for fresh, primary- and secondary-processed agricultural and fisheries products.

There is also an office under the DA-Office of the Secretary that implements trade remedy measures for the agricultural sector, i.e., which initiates and conducts preliminary investigation on dumping, countervailing and safeguard petitions and implements the special safeguard mechanism. Final investigation on the trade remedy petitions is done by the Tariff Commission. The BOC then implements the imposition/collection of duties resulting (if any) from the trade remedy investigations.

TABLE 21.
Main institutions involved in (agricultural) trade monitoring

Department/organization	Trade-related functions
Office of the President – National Economic and Development Authority	
Tariff Commission	Tariff policies (including tariff concessions, surcharges, and refunds); Final investigations on dumping, countervailing and safeguard protests
National Statistics Office	Collecting, compiling, classifying, producing, publishing, and disseminating general-purpose statistics including trade statistics
Department of Finance	
Bureau of Customs	Collection of import/export duties
Department of Agriculture	
Department of Agriculture	Agricultural trade policies; Implementation of trade remedy laws for the agriculture sector
Bureau of Plant Industry	Plant protection, quarantine and inspection services
Bureau of Animal Industry	Animal protection, Administration of animal quarantine & inspection services
Bureau of Agricultural and Fisheries Product Standards	Development of technical standards and regulations
Bureau of Agricultural Statistics	Trade data collection
National Meat Inspection Service	Inspection services for meat and meat products
National Tobacco Administration	Monitoring of the tobacco industry
National Food Administration	Administration of rice price stabilization program
Philippine Coconut Authority	Formulation and implementation of policies concerning the coconut industry
Bureau of Fisheries and Aquatic Resources	Administration of fish quarantine and inspection services
Sugar Regulatory Administration	Monitoring of sugar supply and administration of sugar export quotas

Source: Government agency websites

While trade data collection and publication are primarily the tasks of NSO, the Bureau of Agricultural Statistics of the DA also undertakes its own data collection of trade data on agricultural commodities.

Building capabilities for effective trade surveillance

The importance of effective trade surveillance cannot be overemphasized. It is the only means by which both government and private industries can provide timely and appropriate response to import surges and cushion any adverse impact of importation. Effective trade surveillance by governments, particularly the Philippines, requires effective coordination among concerned agencies, regular consultation with stakeholders, good database and strong analytical capability of people and institutions involved. It is also important to have product quality standards and regulations that are enforced. Efforts of building capacities should therefore be towards addressing these needs.

5. SUMMARY AND CONCLUSIONS

This final section integrates and summarizes the key findings, addressing each of the objectives of the study.

5.1 Surge in onion and tobacco imports

The use of three methodologies clearly establishes 2001 as the year when there was a surge in onion imports. It was during 2001 when the quantity of imported onions peaked to almost 18 metric tonnes comprising 12 percent of domestic consumption and 22 percent relative to production. In the same year, the quantity imported for the year exceeded the computed volume trigger and the average CIF price fell way below the established trigger price. It should also be noted that this trigger price was breached throughout the reference period of 1999-2004.

In the case of tobacco, import surge was established to have occurred in 2004 based on the trend in absolute volume of imports, its share of domestic consumption and the breaching of its trigger volume. The quantity (57 thousand metric tonnes) imported in 2004 was in fact the largest over the six-year review period and twice the volume of imports in the preceding year. It was also the first time that the volume of tobacco imports exceeded local production, and its share of domestic consumption increased significantly to 64 percent compared to only 46 percent the previous year. The occurrence of import surge in 2004 is also confirmed when quantity of unmanufactured tobacco exceeded the volume trigger.

5.2 Reasons for the import surge

There are two main reasons for the episodes of import surge common to both onion and tobacco. One is the *decline in domestic production* in the years that there were import surges (2001 for onion and 2004 for tobacco). Local onion production decreased from 84 220 metric tonnes in 2000 to 82 610 metric tonnes in 2001, or a decline of two percent. Lower production of onions was attributed to poor weather particularly too much rainfall. Meanwhile, the decline in the local production of tobacco leaf in 2004 was larger, that is by nine percent from 52 900 metric tonnes in 2003 to 48 310 in 2004 when the volume of unmanufactured tobacco imports increased significantly. The main reason for this is that area planted to tobacco was reduced because of high salinity of the soil and the low buying price of tobacco. The prevailing trade policy regime might also have induced the increase or surge in imports. In particular, the *lowering of tariffs on tobacco imports* to seven (7) percent might have encouraged greater importation of tobacco in 2004.

On the other hand, the *much lower CIF prices of imported onions compared to the domestic (wholesale) prices of locally-produced onions* could also be a cause for the surge. Over the period 1999-2004, CIF prices of imported onions averaged at only Php 7.76 per kilo compared to Php 21.34 per kilo of yellow onions and Php 35.34 of red onions. In 2001 when there was a surge, the prices of locally-produced onions were at least two times higher than imported ones.

5.3 Injury impact and causality

Lowering of prices of local produce. Onion farmers experienced significant lowering of prices of their produce and this has been attributed to the onslaught of imports. Data show that farmgate prices of onions declined significantly since 2000 compared to prices in 1999. However, this cannot be explained by the volume of imports. Low farmgate price appears to be associated more with the high volume of production rather than the quantity of imports. Nonetheless, the (CIF) prices of imported onions throughout the study period were so low that it could have had dampening effect on the farmgate prices of onions. Correlation analysis confirmed that lower import prices are associated with lower domestic prices.

Decreased net income/profits. Producers of both onions and tobacco claimed to generate lower incomes because of the surge in imports. This effect on the local onion industry can be attributed to the effect of cheap/low-priced imports on the farmgate prices of onions which resulted in the lowering of net incomes of onion farmers. Meanwhile, local tobacco farmers experienced decreasing volume of sales which resulted in significant declines in their net income. The decline in sales however was mainly due to low production volumes and not on importation.

5.4 Other potential contributors to the injury indicators

Other factors that might have contributed to the injuries reportedly suffered by the local onions and tobacco industry are factors that determine the competitiveness of the industry particularly with imports, such as: i) the increasing cost of production especially the cost of inputs for onion planting and tobacco production contributed to the lowering of profits/net incomes; ii) the poor quality and insufficient quantity of locally-produced tobacco that caused low sales and incomes generated by farmers. Manufacturers assessed the tobacco situation as "one where supply cannot meet the quality or demand requirements of the market, making importation necessary." This could be due to a number of factors including improper and inefficient farming techniques and handling of produce. Improving the competitiveness of domestically-produced onions and tobacco is seen as the solution or long-term remedy to the injury experienced by the industry.

5.5 On effective trade surveillance

In order to provide timely and appropriate response to import surges and cushion any adverse impact of increased and/or cheap importation, an effective trade surveillance system needs to be established/ maintained by the Philippine government. This would require effective coordination among concerned agencies, regular consultation with stakeholders, good database and strong analytical capability of people and institutions involved.

AGRICULTURAL IMPORT SURGES IN DEVELOPING COUNTRIES

Analytical framework and insights from case studies

One of the main goals of the surge investigation is to provide a broader understanding of the capacity of the developing countries to use enhanced trade surveillance and trade remedy measures with the objectives of identifying, analysing and responding to import surges.

The interaction among the contributing factors to import surges often brings about outcomes that are different from the effect of each individual factor. Such interaction often occurs because of the overlap in the timing of the involvement of the various contributing factors. What is important when such interaction occurs is to determine what factor is most influential in creating an import surge and examine how the effect of the most influential factor is exacerbated or attenuated by the presence of other factors.

The term 'injury' originally relates to producers' loss and its use may be misleading and too narrow in the examination of the impacts of import surges.... It is [...] more insightful to use the term 'consequence' and to specify who loses and who gains in examining the impacts of the import surges over a broad spectrum of stakeholders.

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