STANDARDS AND GLOBAL TRADE: A VOICE FOR AFRICA

THE WORLD BANK
Washington, D.C.

1818 H Street, NW
Washington, DC 20433
Telephone 202-473-1000
Internet www.worldbank.org
E-mail feedback@worldbank.org

1 2 3 4 05 04 03

The findings, interpretations, and conclusions expressed herein are those of the author(s) and do not necessarily reflect the views of the Board of Executive Directors of the World Bank or the governments they represent.

The World Bank does not guarantee the accuracy of the data included in this work. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of the World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

This book was made possible through support provided by the Office of Sustainable Development, Bureau for Africa, U.S. Agency for International Development, under the terms of Grant No. AFR-G-00-00-00016-00. The opinions expressed herein are those of the author(s) and do not necessarily reflect the views of the U.S. Agency for International Development.

Library of Congress Cataloging-in-Publication Data

Standards and global trade: a voice for Africa / John S. Wilson, Victor O. Abiola (editors).
p. cm.
Includes bibliographical references.
ISBN 0-8213-5473-6
1. Africa—Foreign economic relations. 2. Exports—Africa. 3. Quality control—Africa. 4. Export marketing—Africa. I. Wilson, John S., 1956- II. Abiola, Victor O., 1975- III. World Bank.

HF1611.S73 2003
328'.3'096–dc21 2003045032

Cover Photo Credit: World Bank Photo Library / Illuminating Development Collection / Eric Miller

Contents

Foreword v

Acknowledgments vii

Contributors ix

Abbreviations xi

Executive Summary xix

Introduction xxv
John S. Wilson
Victor O. Abiola

1 Improving Market Access Through Standards Compliance: A Diagnostic and Road Map for Kenya 1
Hezron Omare Nyangito
Tom Olielo
David Magwaro

2 Bridging the Standards Divide: A Case Study and Action Plan for Mozambique 65
Gabriela Rebello da Silva
Lara da Silva Carrilho

3 Standards, Technical Regulations, and Product Quality: Institutional Evidence from Nigeria 165
J. Adeboye Adeyemo
Abiodun S. Bankole

4 Standards and Trade in South Africa: Paving Pathways for Increased Market Access and Competitiveness 235
André Jooste
Erik Kruger
Flip Kotzé

5 Enhancing Uganda's Access to International Markets: A Focus on Quality 371
N. Rudaheranwa
F. Matovu
W. Musinguzi

Index 427

BLANK

Foreword

TRADE IS A CRUCIAL DRIVER OF GROWTH, YET AFRICA WITH 10% OF WORLD population, represents less than 2% of world trade. Most African economies are small and provide limited national markets for local trade that can spur faster growth rates for development. As a result, the pursuit of better access to foreign markets is, therefore, a crucial component of Africa's development strategy. Yet, the erosion in the region's share of world trade between 1970s and 1990s represents approximately $70 billion, or about one-fifth of its gross domestic product (GDP).

Africa includes many of the world's poorest countries, with 300 million of its people living on less than 1$ a day. Simply halving the number of the continent's poor by 2015 will require an approximate annual growth of about 7% as well as more equitable distribution of income. Increasing its engagement in international trade and improving penetration of global markets can help achieve this pace of growth. While there are many complementary actions that are needed to improve the investment climate so as to allow a higher growth rate to be achieved, addressing the effect of product standards both as barriers to trade and opportunities to expand market access is likely to be one area where action will have a high rate of return.

In expanding trade, the link between standards, access to foreign markets, and development is at the forefront of policy debate. This is particularly true with regard to Africa. African countries face critical challenges in improving domestic capacity to meet production and quality standards that are required in foreign markets. As this volume documents, this process will include; (1) enhancing production practices, (2) improving quality assurance and management systems by firms, and (3) better monitoring, evaluation, product testing and packaging methods, to respond to changing technical requirements of trading partners. Institutional reforms, investment in human capital and infrastructure improvements in laboratories and facilities are also necessary.

However, Africa's investment in promoting exports in compliance with international norms will be more beneficial if its trading partners (particularly in Europe and the United States) advance complementary trade policies. These include reduction in agriculture subsidies that depress international product prices, reduction in high tariffs that restrict higher-end value imports, and elimination of non-tariff measures that limit trade, including restrictive standards and technical regulation, duplicative testing and certification procedures, rules of origin, and antidumping duties.

Non-compliance with international standards deprives African farmers access to key international markets, and may lead to a further reduction in global market share—especially in agricultural products like horticulture and fisheries, and light manufactures like textiles. Without addressing market access and international standards compliance issues, African firms and farmers will be unable to take full advantage of recent market opening initiatives such as the US African Growth and Opportunity Act and the EU's Everything But Arms initiative.

There is a strong need to support and strengthen effective programs and initiatives designed to improve the ability to comply with international standards and to support the harmonization of technical regulations regionally. The assessment and analyses contained in this book directly compliment related work on these issues. For example, the findings will serve to inform specific projects or programs that can be implemented through the new Standards and Trade Development Facility (STDF) established by the World Bank and partner agencies to strengthen international coordination in technical assistance on product standards. The Facility offers the opportunity to translate the results of the case studies contained in this book into concrete actions that can help African firms and farmers implement international standards to increase exports that will boost incomes of the poor.

The book provides in-depth case-by-case analysis of five African countries—Kenya, Mozambique, Nigeria, South Africa, and Uganda. It is intended to be a resource for information and guidance for policymakers, the development community, and others in a critical new "behind the border" barrier to trade. Each chapter discusses the economic context in which standards apply to each country and examines the mechanisms with which the country and its representatives have participated in the process of setting/revising standards and technical regulations at the local and international level. The analysis includes a review of existing laws and regulations and the extent to which they are consistent with current international norms. It examines each country's physical infrastructure and organizational capacities to design and implement standards and technical regulations. The authors also discuss and analyze the implementation processes and some estimated impact of various standards, technical regulations, and related production/marketing practices in about thirty specific industry segments.

Perhaps most important, the volume suggests concrete action plans on how African firms and farms can improve product quality and reach international markets in key commodity sectors. These recommendations directly complement Africa's market access development objectives, as outlined by the New Partnership for Africa's Development (NEPAD). By identifying concrete projects—including those that can be championed by development institutions and NGOs—to help African countries improve their trade capacity, the action plans can serve as a useful resource to inform decisions on practical ways to fulfill the commitment contained in the WTO's Doha Development Agenda to meet development and trade needs in the region.

Nicholas Stern
Senior Vice President and
Chief Economist
The World Bank

Acknowledgments

COMPLETION OF THIS BOOK WOULD NOT HAVE BEEN POSSIBLE WITHOUT THE participation, support, advice, and encouragement of many individuals who contributed directly to its publication.

Indeed the chapters included in this book reflect collaborative work among research teams consisting of trade specialists, economists, standards experts, and practitioners across several countries. The content in the volume also reflects input from colleagues at the World Bank, other institutions, research networks, universities, and private sector groups. In particular, we would like to acknowledge the Center for International Agricultural Marketing and Development (CIAMD), South Africa; The Development Policy Center, Department of Economics, University of Ibadan (DPC), Nigeria; Instituto Nacional de Normalização e Qualidade (INNOQ), Mozambique; Universidade Eduardo Mondlane (UEM), Mozambique; Kenya Institute for Public Policy Research and Analysis (KIPPRA); Institute of Economics, Makerere University, Uganda; Kenya Bureau of Standards (KEBS); Uganda National Bureau of Standards (UNBS); and other groups in Africa. The views and recommendations expressed in this volume, however, are of course entirely those of the authors. They do not necessarily reflect views of the World Bank Group, its Executive Directors, shareholder governments, or any other institution.

The book was produced as part of a project funded by the U.S. Agency for International Development, under the Africa Trade and Investment Policy Program (ATRIP). This financial support is gratefully acknowledged. Support for its completion was also drawn from work underway on trade and standards at the World Bank, supported by the United Kingdom, Department for International Development (DFID). Moreover, the content in this volume draws upon diagnostic work and country studies underway elsewhere, including work ongoing in international agencies including the World Trade Organization (WTO), Food and Agriculture Organization (FAO), and United Nations Conference on Trade and Development (UNCTAD), among others.

In particular, we wish to thank the World Bank country directors, country economists, and sector specialists for their valuable input as reviewers of each chapter, including Makhtar Diop, Fayez S. Omar, Robert R. Blake, Darius G. Mans, Delfin Sia Go, Peter G. Moll, Alberto D.K. Agbonyitor, and Dipac Jaiantilal. The encouragement and advice of Paul Collier and Bernard Hoekman throughout this project is especially acknowledged and very much appreciated. In addition, we would like to thank Steve Jaffee, who played an important role in providing assistance in the early stages of the project. We would also like to thank Lawrence Hinkle, Philip English, Keiko Kubota, Cornelis de Haan, Cornelis Van Der Meer, Victoria Kwakwa, Francis Ng, and especially Lolette Kritzinger-van Niekerk and staff in the Bank's country office in South Africa, among others. Special thanks also to Tsunehiro Otsuki and Baishali Majumdar in compiling the preliminary results of the World Bank TBT survey on standards referenced in several chapters of this book. We would also like to thank Rob Simms Jason Victor, and Michelle Chester,

Maria Kasilag, Rebecca Martin, and Maribel Flewitt for their support throughout the production of this book.

We would also like to acknowledge the participants in a seminar and videoconference in July 2001, as part of the work leading to this book. The U.S. Trade Representative Robert Zoellick, Trade Minister Biwott of Kenya, Director General Mike Moore of the World Trade Organization (WTO), Nicholas Stern, Senior Vice President of the World Bank, and members of the Africa Economic Research Consortium (AERC) were instrumental in launching this work. In particular we would like to thank Dominique Njinkeu and T. Ademola Oyeyide we would for their advice and assistance during the seminar. Furthermore, we are particularly grateful to Rosa Whitaker, William Jackson, Susan Troje, Lisa Ortiz, and other staff from the USTR and U.S. Agency for International Development; as well as staff from the U.K. Department for International Development for their encouragement, guidance, and support. Staff of the World Bank office of the publisher and others in the production of the book is also gratefully acknowledged.

Finally, the chapters included in this book also benefited from feedback and comments from numerous organizations, associations, and private sector representatives and participants in one-on-one interviews, focused group sessions, workshops, and seminars. We acknowledge the considerable time, effort, and valuable information these participants have devoted to the content of these chapters and hope readers will benefit from the collective efforts of many who contributed to the book's completion.

Contributors

Hezron Omare Nyangito	Kenya Institute for Public Policy Research and Analysis (KIPPRA)
Tom Olielo	Kenya Bureau of Standards (KEBS)
David Magwaro	Ministry of Trade and Industry
Dr. J. C. Kegode	Kenya Plant Health Inspectorate Service (KEPHIS)
Dr. W. Songa	KEPHIS
Esther Kimani	KEPHIS
Ann N. Kingori	KEPHIS
E. B. Manyara	Ministry of Trade and Industry (MTI), Kenya
Francis M. Warui	MTI
Janet Abilla	MTI
George Gachoka	MTI
J. Ombwori	Ministry of Agriculture and Rural Development (MA&RD), Kenya
Andama Mosoti	MA&RD
Caroline Outa	Kenya Bureau of Standards (KEBS)
J Mokaya	KEBS
Stephen J. Muli	Kenya Chamber of Commerce and Industry (KCCI)
Patrick Okoth	Attorney General Chambers
Rod Evans	Home Grown Ltd.
L.K. Mwona	MCFU Ltd.
John Njenga	Kenya Flower Council
Peter Gatonye	Kenya Flower Council
Dr. J.P. Nthuli	Department of Veterinary Services (DVS)
Cosmas Kyengo	Fresh Produce Export Association of Kenya (FPEAK)
Dr. Stephen Mwika	Association of Fish Processors and Exporters of Kenya
J. M. Nzuma	Kenya Institute for Public Policy Research and Analysis
J. Kamau	Kenya Association of Manufacturers (KAM)
Lydia Ndirangu	Kenya Institute for Public Policy Research and Analysis
	Sunripe Exporters of Vegetables and Fruits, Nairobi
	Suera Flowers, Nairobi
	Waridi Flowers, Nairobi
	Makindu Exporters, Nairobi
	Tea Board of Kenya, Nairobi
	Department of Fisheries, MA&RD
	Homegrown Ltd., Nairobi
	Cirio Del Monte Ltd., Nairobi

	Kenya Association of Manufacturers (KAM)
	Association of Fish Processors and Exporters of Kenya (AFIPEK)
	Fresh Produce Export Association of Kenya (FPEAK)
	Kenya Flower Council (KFC)
Gabriela Rebello da Silva	Instituto Nacional de Normalização e Qualidade—INNOQ
Lara da Silva Carrilho	Universidade Eduardo Mondlane (UEM)
J. Adeboye Adeyemo	University of Ibadan, Nigeria
Abiodun S. Bankole	University of Ibadan, Nigeria
André Jooste	The Centre for International Agricultural Marketing and Development (CIAMD)
Erik Kruger	InfoHarvest
Flip Kotzé	CIAMD
Hans Balyamujura	CIAMD
Ernst Idsardi	CIAMD
John le Roux	CIAMD
Stephan Hosking	UPE
Chris Ettmayer	UPE
N. Rudaheranwa	Makerere University Institute of Economics, Uganda
F. Matovu	Makerere University Institute of Economics, Uganda
W. Musinguzi	Uganda National Bureau of Standards

Abbreviations

AAM	Mozambique Cotton Association
ABT	Administrative Barrier to Trade
ABIODES	Association for Organic Agriculture, Biodiversity and Sustainable Development in Mozambique
ACE	Audit Control and Expertise
ACM	Mozambique Trade Association
AERC	African Economic Research Consortium
AGOA	African Growth and Opportunity Act
AGRARIUS	Association of Mozambican Farmers
AICAJU	Association of Cashew Producers
AIMO	Mozambican Industrial Association
AIOPA	Association of Edible Oil and Related Products Producers
AJAM	Young Farmers Association
AMAPIC	Mozambican Association of Industrial Prawn Fisheries
APAMO	Mozambican Association of Sugar Producers
APC—EC	Africa Caribbean, Pacific—European Union
APEC	Asia Pacific Economic Co-operation
APCER	Portuguese Association of Certification
APHIS	USDA Animal and Plant Health Inspection Service
APSSS	South of Save Salt Producers Association
ARC	Agricultural Research Council
ARSO	African Regional Organization for Standardization
ATRIP	Africa Trade and Investment Policy Project
BIPM	International Bureau for Weights and Measures
BM	Bank of Mozambique
BOP	Balance of Payment
BRC	British Retail Consortium
BSTM	Bank Standard Totta of Moçambique
BUDS/SSE	Business Uganda Development Scheme Support for Small Scale Enterprises
BVQI	Bureau Veritas Quality International
CAC	Codex Alimentarius Commission
CADI	Business Advisory Centre
CAIM	Manica Agro Industrial Company
CASCO	Committee on Conformity Assessment at ISO
CBI	Circuit Breakers Industry
CBS	Citrus Black Spot
CCA	Codex Coordinating Committee for Africa

CCP	Codex Contact Point
CCFFP	Codex Committee on Fish and Fishery Products
CCM	Mozambique Chamber of Commerce
CENELEC	European Committee for Electro technical Standardization
CEO	Chief Executive Officer
CFC	Common Fund for Commodities
CGA	Citrus Grower Association
CHAEM	Centre for Environmental Health and Medical Examinations
CIB	Coffee Industry Board
CIF	Cost Insurance and Freight
CKS	Coordinating Specifications
CLUSA	Cooperative League of the United States of America
CM	Council of Ministers
CM	Check Mate International Pty
CMB	Coffee Marketing Board
CMT	Committee of Ministers Responsible for Trade at SADC
CNPML	Mozambican National Cleaner Production Centre
Codex	Codex Alimentarius
COMESA	Common Market for Eastern and Southern Africa
COMPETE	The Competitive Private Enterprise and Trade Expansion
COPOLCO	Committee on Consumer Policy at ISO
CPAP	Comissão Permanente da Assembleia Popular
CPI	Investment Promotion Centre
CPLP	Community of Countries with Portuguese as the Official Language
CRI	Citrus Research International
CSIR	Council for Scientific and Industrial Research
CSTA	Customs Technical Council
CTA	Confederation of Mozambican Economic Associations
CTN	Technical Committees on Standardisation
CTNS	Sector Technical Committees on Standardisation
DANIDA	Danish International Development Agency
DDA	Dairy Development Authority
DECOM	Consumers Protection Association
DEVCO	Committee on Developing Country Matters at ISO
DF	Forestry Department-FAEF
DFID	Department for International Development UK
DFPT	Deciduous Fruit Producers Trust
DFR	Department of Fisheries Resources
DGR	Directorate of Genetic Resources
DHA	Department of Environmental Health at the Ministry of Health
DINA	National Directorate of Agriculture at Ministry of Agriculture and Rural Development
DINAP	National Directorate of Livestock at Ministry of Agriculture and Rural Development
DIP	Department of Fisheries Inspection at Ministry of Fisheries
DNCI	National Directorate of Domestic Market at Ministry of Industry and Commerce
DNE	National Directorate of Statistics
DNER	National Directorate for Rural Extension at Ministry of Agriculture and Rural Development
DNFFB	National Directorate of Forestry and Wildlife at Ministry of Agriculture and Rural Development
DNI	National Directorate of Industry at Ministry of Industry and Commerce
DNP	National Directorate of Fisheries at Ministry of Agriculture and Fisheries

DOH	Department Of Health
DPHQ	Department of Plant Health and Quality
DPIC	Provincial Directorate of Industry and Trade
DS (SNS)	Seed Department at Ministry of Agriculture and Rural Development
DSV	Department of Plant Protection at Ministry of Agriculture and Rural Development
DTI	Department of Trade and Industry
EAC	East African Community
EAP	Economically Active Population
EAN	Electronic Article Number
EBAS	Enterprise Business Assistance Scheme
EC	European Commission
EEC	European Directive Technical Regulation
EIA	Environment Impact Assessment
EMIA	Export Marketing Incentive Assistance
EPOPA	Export Promotion of Organic Products from Africa
ERP	Economic Recovery Program
ESLC	Electrical Supplies Liaison Committee
EU	European Union
EUREPGAP	Euro Retailers Produce Working Group Good Agricultural Practise
EVDLU	Essential Veterinary Drug List of Uganda
FAEF	Faculty of Agronomy and Forestry Engineering
FANR SDU	SADC Food Agriculture and Natural Resources Sector Development Unit
FAO	United Nations Food and Agriculture Organization
FDI	Foreign Direct Investments
FEMA	Business Forum for the Environment
FEWS	Famine Early Warning System
FLAG	Food Legislation Advisory Group
FPT	Fresh Produce Traceability
FRUTISUL	Southern Mozambique Fruit Growers Association
FSC	Forest Stewardship Council
FTA	Free Trade Area
GAP	Good Agricultural Practice
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GLP	Good Laboratory Practice
GMO	Genetically Modified Organisms
GMP	Good Manufacturing Practice
GOM	Government of Mozambique
GPSCA	Office for the Promotion off Commercial Farming, Ministry of Agriculture and Rural Development
GSP	General System of Preference
GTM	Metrology Working Group at INNOQ
HACCP	Hazard Analysis of Critical Control Point
HAG	Hygiene Assessment System
IAF	International Accreditation Forum
IAFI	International Association of Fish Inspectors
HDI	Human Development Index
HORTEXA	Horticultural Exporters Association
HPI	Human Poverty Index
IAF	International Accreditation Forum
IAM	Mozambican Cotton Institute—Ministry of Agriculture and Rural Development

ICC	International Capital Corporation (Mozambique)
ICCIDD	International Council for the Control of Iodine Deficiency Disorders
ICM	Mozambique Cereals Institute at Ministry of Industry and Trade
IDD	Iodine Deficiency Disorders
IDEA	The Investment In Developing Export Agriculture
IDIL	Institute for the Development of Small-Scale Industry at Ministry of Industry and Trade
IDPPE	Institute for the Development of Small-Scale Fisheries at Ministry of Fisheries
IEC	International Electrotechnical Commission
IFIR	International Forestry Industry Round Table
IFOAM	International Federation of Organic Agriculture Movements
ILAC	International Laboratory Accreditation Co-operation
ILO	International Labour Organisation
IMF	International Monetary Fund
INA	National Sugar Institute—Ministry of Agriculture and Rural Development
INCAJU	Institute for the Promotion of Cashew at Ministry of Agriculture and Rural Development
INE	National Institute of Statistics
INFCO	Committee on Information Systems and Services at ISO
INIA	National Institute of Agronomic Research at Ministry of Agriculture and Rural Development
INIVE	National Institute of Veterinary Research at Ministry of Agriculture and Rural Development
INNOQ	National Institute of Standardisation and Quality at Ministry of Industry and Trade
IOLMF	Indian Ocean Legal Metrology Forum
IOR—ARC	Indian Ocean Rim Association for Regional Co-operation
IP	Integrated Programme for Industrial Development in Mozambique
IPA	Livestock Production Institute at Ministry of Agriculture and Rural Development
IPEX	Mozambican Institute of Export Promotion at Ministry of Industry and Trade
IPP	Fisheries Research Institute at Ministry of Fisher
IPPC	International Plant Protection Convention
IPQ	Portuguese Institute for Quality
IRLCO—CSA	International Red Locust Control Organisation
ISO	International Organisation for Standardisation
ISO 1400	Environmental Management Standard
ISO 17025	General requirements for the competence of test and calibration laboratories
ISO 9000	Management system standard
ISO 9001	Quality management system
ITC	International Trade Centre
ITS	Intertek Testing Services International Limited
ITU	International Telecommunications Union
JITAP	The Joint Integrated Assistance Program
KARI	Kawanda Research Institute
LBSC	Local Business Service Centre Agency
LDC	Least Developed Country
LINK	Forum of National and International NGOs in Mozambique
LMO	Living Modified Organisms
LNHAA	National Laboratory for Water and Food Hygiene
MA	Ministry of Agriculture
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MADER	Ministry of Agriculture and Rural Development
MAC	Manufacturing Advisory Centre
MAP	Ministry of Agriculture and Fisheries
MD	Ministerial Diploma
MEC	Member of the Executive Council (Province)

MFPED	Ministry Of Finance, Planning and Economic Development
MIC	Ministry of Industry and Trade
MICOA	Ministry for the Co-ordination of Environmental Affairs
MICT	Ministry of Industry, Trade and Tourism
MISAU	Ministry of Health
MOA	Memorandum of Understanding
MOH	Ministry of Health
MOU	Memorandum of Understanding
MP	Ministry of Fisheries
MPF	Ministry of Planning and Finance
MRA	Mutual Recognition Agreement
MRL	Maximum Residue Level
MSC	Marine Stewardship Council
MSF—CIS	Doctors Without Borders
MTTI	Ministry of Tourism, Trade and Industry
NAFTA	North American Free Trade Agreement
NCC	National Codex Committee
NCD	New Castle Disease
NCS	National Calibration Service
NDA	National Department of Agriculture
NEDLAC	National Economic Development and Labour Council
NEMA	National Environment Management Authority
NEP	National Inquiry Point
NGO	Non-Governmental Organization
NMI	National Metrology Institute
NML	National Metrology Laboratory of South Africa
NOGAMU	National Organic Agricultural Movement of Uganda
NOSA	National Occupational Safety Association
NPPO	National Plant Protection Organisation
NSB	National Standards Body
NSC	National Standards Council
NSTIKA	Enterprise Promotion
NTB	Non-tariff Barrier
NTE	Non-traditional Exports
NYTIL	Nyanza Textile Limited
OAU	Organisation of African Unity
OECD	Organisation for Economic Development and Cooperation
OGL	Open General License
OIC	Orange International Certificate
OIE	International Office of Epizootics
OIE	World Organisation for Animal Health (Organisation International des Epizooties)
OIML	International Organisation of Legal Metrology
PAMM	Programme Against Micronutrient Malnutrition
PARPA	Plan of Action for the Reduction of Absolute Poverty
PDI	Previous Disadvantaged Individuals
PHA	Plant Health Auditing
PHC	Primary Health Care
PHP	Plant Health Promotion
PMB	Produce Marketing Board
PODE	Enterprise Development Project
PPECB	Perishable Products Export Board

PRA	Pest Risk Analyses
PROAGRI	Project for Agriculture and Rural Development
PSI	Pre-Shipment Inspection
PSF	Private Sector Foundation
PTB	German National Institute for Metrology
PWP	Protocols and Work Programmes
R&D	Research and Development
RDA	Recommended Dietary Allowance
RSPM	Regional Meeting of Salt Producers and Traders
SABS	South African Bureau of Standards
SACU	Southern African Customs Union
SADC	Southern African Development Community
SADCA	SADC Co-operation in Accreditation
SADCMEL	SADC Co-operation in Legal Metrology
SADCMET	SADC Co-operation in Measurement Traceability
SADCSTAN	SADC Co-operation in Standardisation
SAFTA	Southern African Free Trade Agreement
SALMA	South African Lumber Miller's Association
SAMIC	South African Meat Industry Company
SANAS	South African National Accreditation System
SAP	Structural Adjustment Program
SAPO	South African Plant improvement Organisation
SEILA	Secretary of State for Light and Food Industries
SEMOC	Mozambican Seed Company
SGS	Société Générale de Surveillance (Verification, testing and certification)
SI	International System for Units
SIDA	Swedish International Development Agency
SIMA	Agricultural Markets Information Systems
SIP	Special Import Program
SITCD	Industrial and Trade Sector Coordinating Division at SADC
SME	Small and Medium Enterprises
SMME	Small Medium and Micro Enterprises
SNS	National Seed Service
SOE	State Owned Enterprises
SPEED	Support for the Private Enterprise Expansion and Development
SPF	Sector Partnership Fund
SPIS	The Sanitary and Phytosanitary Inspection Services
SPS	Sanitary and Phytosanitary Measures
SQAM	Standardisation, Quality Assurance, Accreditation and Metrology
SQAMEG	Standardisation, Quality Assurance, Accreditation and Metrology Expert Group
SQMT	Standardization, Quality Assurance, Metrology and Testing
SSASI	World Bank Sub-Saharan Africa Seed Initiative
TAC	Tender Advice Centre Programme
TBT	Technical Barriers to Trade—WTO Agreement
TIPS	Trade and Investment Policy Secretariat
TC	Technical Committee
TCP	Technical Cooperation Programme
TDCA	SA-EU Trade, Development and Co-operation Agreement
TE	Traditional Exports
TEPU	Tropical Ecological Foods Uganda
TIDP	Trade and Investment Development Programme

TNF	Trade Negotiation Forum (SADC)
TQM	Total Quality Management
UCC	Uniform Code Council
UCDA	Uganda Coffee Development Authority
UCTF	Uganda Coffee Trade Federation
UEM	University Eduardo Mondlane
UEPB	Uganda Export Promotion Board
UFEA	Uganda Flower Exporters Association
UFPEA	Uganda Fish Processors and Exporters Association
UGIL	Uganda Garment Industries Limited
UIA	Uganda Investment Authority
UMA	Uganda Manufacturers Association
UN	United Nations
UNBS	Uganda National Bureau of Standards
UNCTAD	United Nation Conference on Trade and Development
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organization
UNECE	United Nations Economic Commission for Europe
UNEP	United Nation Environmental Programme
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organisation
URA	Uganda Revenue Authority
US $	United States Dollars
USA	United States of America
USAID	United States Agency for International Development
USFDA	United States Food and Drug Administration
USI	Universal Salt Iodisation
UTRA	Technical Unit for Customs Restructuring
UTRE	Technical Unit for Enterprises Restructuring
VAT	Value Added Tax
VAM	Vulnerability Assessment and Mapping
VC	SABS Compulsory Specification
WFP	United Nations World Food Programme
WHO	World Health Organisation
WTO	World Trade Organisation
WTO/SPS	World Trade Organisation, Sanitary and Phytosanitary Agreement
WTO/TBT	World Trade Organisation, Technical Barriers to Trade Agreement

BLANK

Executive Summary

UNDERSTANDING THE LINK BETWEEN TRADE, STANDARDS, AND EXPORT COMPETITIVENESS is at the forefront of trade policy analysis and debate. This is particularly true in regard to enhancing pro-poor growth and employment opportunities in Africa. Global competition has become more intensified in terms of quality, price, supply chain management, and dependability of delivery systems. Consumer preferences (influenced by increased incomes, as well as, health and other social concerns) and demand for quality products are also changing the way suppliers and producers respond to market signals. Consumer demand in developed countries is also starting to reflect preferences for cultural values such as concern over child labor laws and environmentally friendly practices in product purchases.

This broadening of consumer demand (especially in the area of food safety) has intensified the development of new industry codes of practice and enforcement mechanisms. The development of standards is also becoming increasingly driven by the private sector as enforcement is moving toward primary production levels. Likewise, the burden of standards compliance appears to be shifting to producers. And, in concert with national regulatory agencies, monitoring compliance is increasingly becoming the function of retailers and other groups higher up in the distribution chain.

Changing consumer demand is not only influencing national and international market structures. It is also putting pressure on national and international standards development and regulatory agencies to become more effective in supporting the private sector and ensuring compliance. Consumer confidence in the regulatory capacity of national and international agencies is diminishing as a result of health-related product scares that have emerged in recent years (for example, foot-and-mouth disease and Bovine Spongiform Encephalopathy). Consumers are demanding more information about products, chemical content in foods, and production processes. For example, while many African countries, such as Kenya and Uganda, struggle with the challenge of restructuring the fishing industry after several product bans by Europe, some buyers in developed countries are insisting on eco-friendly fish harvesting and processing by suppliers.

Addressing these changes in international demand patterns, market structure, and enforcement requirements poses a real challenge to firms and farmers and their supporting organizations (particularly smallholders) in developing countries. This is particularly true in Africa. In this volume, we seek to identify the specific capacity constraints, opportunities, and institutional reform needed for market-access success in five African countries—Nigeria, Uganda, Mozambique, South Africa, and Kenya. We also seek to place trade facilitation measures and standards (both voluntary and mandatory technical standards) within a broader developmental context. Table 1 outlines the list of countries and commodity sectors included in our analysis.

The case studies in this volume reveal the existence of gaps in standards formulation, compliance, and enforcement capacity in Africa as compared to international norms. Such gaps appear to be even broader when a comparison is made between standards and industry codes of practice that are prevalent in specific industry sectors (in African countries and those of their trading partners in Europe and the United States).

Table 1: Specific Country and Sector Studies under the Africa Trade Standards Project

Country	Product Sector(s)
Kenya:	Coffee; Fruits & Vegetables; Flowers; Fish & Fishery Products; Cotton & Textiles
Mozambique:	Cashew; Sugar; Cotton; Peanuts; Seeds; Salt; Fruits & Vegetables; Flowers; Fish & Fishery Products
Nigeria:	Horticulture; Food & Beverages; Cocoa & Cocoa Products; Textiles and Clothing; Fish & Fishery Products
South Africa:	Electro-technical Products; Forestry; Textiles; Fisheries; Fruit Industries; Meat & Livestock
Uganda:	Flowers; Honey; Fish; Textiles; Horticulture (Flowers and Vegetables); Organic Coffee

Specifically, this analysis highlights the following common challenges facing the private sector in Africa:

(i) Differences in consumer preferences and demand for quality among consumers in African countries and those of their trading partners in developed countries (Europe, United States, etc.). Demand for product quality appears to be generally lower in African countries, and firms and farmers do not perceive quality issues as critical to domestic sales. There are a number of reasons for this. (a) The case study on Nigeria suggests, for example, that poverty forces local consumers to tolerate lower-quality products; (b) There appears to be a lack of consumer awareness about food safety and quality. Consumers are not aware of the impact of standards like Maximum Residue Levels (MRLs), animal diseases control procedures, etc.; (c) Unlike Europe, many African countries lack strong consumer organizations that pressure retailers and producer groups to provide higher quality goods; and (d) Differences in cultural preferences between consumer groups in many African countries and their counterparts abroad. For example, labor and environmental standards are not priorities for local consumer groups in Africa. To summarize, in meeting local demand, it appears that local business practices in many African countries tend to substitute quality for price—sometimes even in the procurement of intermediate goods.

(ii) Differences in the complexity of market structures, industry size, supply chain, and distribution systems facing local suppliers. In many cases, supplying the local market is less complicated and requires fewer middlemen (or none at all). Consumers rarely demand the use of traceability systems, relying more on local brand names and the reputations of product peddlers (which is not the case for non-local consumers). African firms (especially Small and Medium Enterprises [SMEs]) seeking to export have found the requirements of markets in developed countries (e.g., CE marking, Forestry Stewardship Council, United States Underwriters Laboratories Mark, EUREGAP, and packaging requirements) to be difficult to meet. Because local consumer expectations for product quality are much lower than international norms, national regulations are considerably "softer" than international ones. Therefore, local producers develop production systems that only meet these lower standards, thereby making it difficult for producers to "ramp up" to meet the stricter international standards should they choose to export. This leaves the bulk of the exporting market to the largest local firms and multinational companies who can afford to adjust their production systems to meet international regulations.

(iii) Most of the countries examined here have not replaced the quality functions of defunct commodity boards with appropriate quality control and enforcement mechanisms that will support more liberal access to markets. The Uganda study suggests, for example, that the depression in international prices of some commodities (e.g., coffee) is putting pressure on local coffee producers, in the absence of effective regulatory agencies, to substitute quality for price.

(iv) Participation in the formation of global standards, codes of practice, or regulations appears not to have been very effective in some African countries. National channels through which local private sector inputs are reflected in international standards debates appear to be ineffective because of low political priority inadequate government participation, and private sector representation. As a result, domestic codes of practice developed in these countries are neither recognized nor merged with similar codes in their export markets.

Moreover, standards development agencies and organizations offer few mechanisms to collect input from local African producers in the development of codes of practice. As a result, many domestic producers surveyed in this volume are standards-takers (forced to accept and try to meet international standards), reacting to ever-changing standards that do not accommodate unique constraints pre-existing in the local environments. Sometimes, as standards-takers, these domestic producers face harsh penalties (such as blanket industry bans) for non-compliance. This also affects their level of awareness and understanding of these standards, and their preparedness for compliance. Many firms have to rely on minimal interactions with importer agents, or on national standards development organizations in making such information available.

(v) Many of the industry sectors assessed here have directly benefited from foreign direct investment (FDI) in compliance with foreign standards. Multinational companies dominate most exports from these sectors. However, recent decline in FDI in the regoin, coupled with low technological capacity, and weak physical infrastructure and transport facilities are undermining the long-term competitiveness of these sectors.

(vi) While access to information about global industry best practices or standards does not appear to be a problem for most multinationals, in the five countries examined in this volume, the same cannot be said for local small- and medium-sized enterprises (SMEs)—particularly for small farmer groups. African SMEs do not to have the resources to invest in modern information systems. Government agencies and other organizations that provide extension services and assistance in standards often lack the necessary qualified staff, financial resources, and equipment to assist on a regular basis.

(vii) Compliance to international standards is also demanding a shift from manual and low-skilled labor practices in agriculture and light manufacturing to more sophisticated best practices comparable to those found in developed countries. For example, African farmers are now required to invest in Integrated Crop Management (ICM) practices and Euro Retailers Produce Working Group Good Agricultural Practise (EUREGAP) principles, Hazard Analysis of Critical Control Point (HACCP) protocols, and standards that require better enterprise-wide supply management techniques, record systems, and equipment, including detailed labeling and traceability systems. In implementing and managing these systems, private sector investment in human capital resources development is crucial.

Small- and medium-sized enterprises and farmer groups are particularly challenged by these requirements because (a) they lack the financial and human resources needed to upgrade their products and production/farming practices and processes to meet international norms, (b) industry players do not appear to be well organized in a manner that will facilitate cost-effective traceability of products, and (c) certification schemes and testing are mainly provided by foreign firms, and the costs of testing and certification for some industries (e.g., forestry) appear to be very high for SMEs. To summarize, simultaneous application of multiple standards and technical requirements the increasing costs and difficulties of testing and verification procedures; and rapidly changing consumer preferences of overseas markets raises the costs of entry into global markets for African SMEs. Many existing SMEs and smallholder farmers are also being forced to close as global competition raises the bar on the products and process

standards that must be met before companies can export.

(viii) Some industry sectors in Africa have been successful in the adoption of internationally acceptable compliance systems, for example, the flower industry in Kenya and the fishing industry in Uganda. These industries have experienced improved product quality as well as increased revenues. However, the price paid for these improvements has been significant, and in many cases, was not attainable without increased foreign direct investments and donor assistance backed by political will and direct government support. For example, the fishing industry in Uganda and Kenya went through several costly European Union (EU) bans, and has not recovered its earlier production levels in Kenya. SMEs seeking to export needed to make significant investments in upgrading technology, equipment, and infrastructure, including the establishment of better quality control facilities before they could re-enter or expand their access to export markets. In some sectors, like textiles, firms may need to develop completely new product lines, overhaul spinning technology, develop a world class garment industry, etc. (as is shown in the case of Nigeria).

Finally, it is important to note that compliance with foreign and international standards does not necessarily secure global market share. Africa's deeper penetration of global markets ultimately depends on the ability of its farms and farmers to produce high-end value and quality products at internationally competitive prices. This task becomes more complicated as compliance to foreign and international standards in Africa is still fraught with many constraints and forthcoming challenges as the global standards development architecture evolves.

The case studies also highlight institutional challenges facing many of these countries. These include:

(i) A lack of consciousness about standards and technical regulations in policy-making. Trade liberalization has placed pressures on the entire policy-making apparatus and institutions dealing with export promotion in Africa, including those related to standards, quality management, and technical regulations. Many of the export promotion plans in these countries mention the need to develop competitive exportable products, yet, little attention is given to quality-related issues.

The assessment of the national standards development framework presented in this volume suggests that there are still numerous gaps in the national standards, metrology systems, quality laws, and codes of practices. It appears there are many national standards that need to be updated to conform to international norms (e.g., grading systems, agricultural practices, disease control, etc.). The Mozambique study, for example, points out that the local cotton grading system is below international standards. While this appears to benefit cotton farmers and traders, it causes technical problems in the ginneries, and affects cotton-seed separation and processing, ultimately resulting in low quality lint sold at discounted prices.

(ii) Many African standards development agencies and notification points lack well-functioning information management infrastructure to coordinate local standards-related activities and interest groups with their international counterparts. The mechanisms for consultations among national Sanitary and Phytosanitary Measures (SPS)/food safety authorities and other stakeholders, both internationally and locally, appear to be inadequate, slow, and sometimes inaccurate.

(iii) Representatives of key standards institutions cannot attend international meetings due to lack of funds. Even when they attend these meetings, the lack of capacity and infrastructure to develop scientific evidence to support negotiations at these meetings hinders them from influencing the outcomes significantly. For example, the capacity to undertake food safety risk assessments is very low in Africa—even in middle-income countries like South Africa—such that contesting or supporting standards for maximum residue levels, pest infection, etc., is very difficult for local producers.

(iv) Human and technological capacity is weak and there is Proliferation of regulatory roles and responsibilities across national agencies.

These create difficulties resource allocation and enforcement problems.

a. Local regulations need to be updated and enforcement mechanisms need to be improved. The depth of required legal reforms necessary in each country depends on the development stage of its private sector, its Standardisation, Quality Assurance, Accreditation and Metrology (SQAM), etc.
b. Essential facilities, such as testing laboratories, are not adequately staffed in many countries in the region and scientific equipment is outdated.
c. Systematic collection and storage of records is not undertaken and local certification agencies are not internationally recognized. This situation is worsening given the declining levels of public expenditures in many countries.
d. A lack of rural infrastructure, sufficient support services, technical information and credit; as well as, high transportation costs, constitute major problems for smallholders in the agricultural sector.

(v) In supporting the private sector to invest in compliance, costs of compliance can be prohibitive for African governments, and Foreign Direct Investment (FDI) is low. Moreover, compliance with SPS measures and environmental requirements may become moving targets because standards often become more stringent once producers achieve compliance.

In addressing these private sector and institutional constraints, recommendations for a reform agenda are outlined in each chapter. In general, these include the following components:

(i) Expand support for the integration of SMEs into the standards development system by designing programs and support schemes tailored to improve SME farming practices, develop extension services and support systems, leverage the use of technology, etc. Here, the focus should be on strengthening backward and forward linkages between SMEs and large export firms. Such programs should also include financial support, technology enhancement, and export support services components that would support SME investment in quality enhancement anchored on cost-effective upgrades of production and transaction processes.[1]

(ii) Streamline the roles, responsibilities, and competencies of relevant standards monitoring, certification and enforcement agencies. Adequate financing; and investment in human, physical, and information assets for better co-ordination and participation in local, national, regional, and international standards should be provided to these agencies. Such support should be anchored on programs that induce active private sector participation.

(iii) Strengthen the legal framework and harmonization process of national quality laws, standards, regulations, and policies to be consistent with international norms. This would involve reviewing national laws and updating them, and designing policies that create incentives and influence private sector investment in compliance.

(iv) Establish integrated information management and reporting tools that can be shared among trade development organizations, their memberships and clients, and international counterparts. There is significant room for ICT-based projects that will enhance communication between stakeholders involved in making, monitoring, enforcing, and adopting standards in Africa.

(v) Support projects that target better certification, accreditation schemes, and enforcement capacity. Monitoring and testing services could be provided through accredited local service providers to reduce costs and delays in

[1]These linkages should provide incentives to employ international standards and must be backed by adequate SME financing instruments. For example, a key strategy employed by South Africa was to develop an incentive scheme called "Competitiveness Fund" under its Department of Trade and Industry (DTI). The Fund offers grant fund assistance and comprehensive support of conformity assessment activities to its SMEs. DTI also hosts a "Sector Partnership Fund" that supports five or more firms and organizations in the development and execution of collaborative projects.

product shipment. Local/regional certification systems can be expanded and customized to meet the needs of SMEs (for example, group certification schemes have been effective in South Africa). In addition, this process should include developing programs to strengthen quality inspections at borders, ports, and production points. This may also extend to enhancing laboratory capabilities, deploying more effective monitoring equipment, etc.

(vi) Strengthen national and/or regional capacity to conduct risk analysis and other scientific and policy research. These analyses will provide critical evidence to boost negotiating capacity at international meetings and resolve disputes that may arise from enforcement either in exports or imports. This would help Africa better exercise rights within the context of theWorld Trade Organisation (WTO) agreements. This may also extend into strengthening research capacity for standards with a focus on the impact, benefits, and importance of compliance.

(vii) Develop high impact awareness campaigns to increase private and public sector awareness of standards and technical regulations. These awareness programs should include local consumer awareness campaigns on the impact of standards, the need for better product quality, and enforcement mechanisms through which violation of consumer quality concerns can be addressed.

(viii) Create better infrastructure for transportation, and other shared facilities (e.g., pack houses) that may help reduce costs of supply chain management and logistics, and improve delivery quality of export products.

A more detailed case-by-case set of recommendations are provided in subsequent chapters of this volume.

Introduction

John S. Wilson
Victor O. Abiola

TRADE FACILITATION AND STANDARDS IN SUB-SAHARAN AFRICA: AN OVERVIEW

Over the last decade, African states have intensified, with varying degrees of success, the implementation of export-led policy reforms that will spur economic growth. Yet, the continent's share of the world's output continues to decline. Progressive attempts at improving the region's involvement in the world economy appear to be marked by a simultaneous decline in its importance to the global economy. The continent's trade with the rest of the world is declining and foreign direct investment (FDI) has fallen. Income levels are among the lowest in the world, and the continent's debt overhang has further retarded growth over time. What role do non-tariff measures, product standards, and related capacity constraints play in this context?

In 1970, total world trade of goods and services were just US$1.5 trillion in current dollars, and made up about 13% of the Gross National Product (GDP). Today, the value of global trade in goods and services is approximately US$8 trillion. Trade in goods accounts for the largest share of global flows at US$6 trillion, followed by trade in commercial services, which represent another US$1.5 trillion (Stern, 2002). For Africa, the reverse is true. Ng and Yeats (1996) estimate a decline in Sub-Saharan Africa's (SSA) share of world exports between 1962 to 1964 and 1991 to 1993, equivalent to an over $11 billion reduction in annual exports. This trend is partly a consequence of a dependency on export products whose share of world trade is declining, as well as, a simultaneous decline in Africa's capacity to maintain its competitive advantage in the production and export of traditional export commodities. More recently, Ng and Yeats (2002) estimate that while global trade in Africa's traditional exports grew at an annual rate of below 2% between 1990 and 1999.

This loss in global market share of traditional commodities is attributable to several factors including: (1) the impact of agricultural production subsidies in developed country markets; (2) anti-export bias in the policies of SSA countries; (3) declining relative growth in global demand for Africa's specialized traditional exports; (4) dysfunctional government intervention, including regulatory policies and tax regimes; (5) high-risk and monopolistic market environments that have constrained the development of financial markets and ensured low returns on investment and capital flight; (6) a depreciation in physical infrastructure and human capital that has undermined cost-effective and competitive production of Africa's traditional exports (some of which relates directly to meeting standards for international market

acceptance); and (7) external shocks and other constraints including those imposed by the continent's trading partners. Moreover, as noted in Ng and Yeats (2002), product price instability may be major problem for exporters. One half of traditional products experienced average price changes of 50% or more. Price changes are associated with collapse of traditional product prices.

The current problem with enhanced competitiveness for African exporters is also related to the fact that overall competitive changes over the past decade have had only a marginal impact on the environment that affects export success. There is no doubt that domestic policy reforms to remove measures of trade protection would contribute to African economic development and export expansion. This includes the type of regulatory and institutional reform outlined in subsequent chapters in this volume. Africa should also move to diversify away from traditional exports—removal of anti-export biases in domestic policy are critical. Increased emphasis on standards and quality, a major theme of this book, is one part of the overall context of reform. It is also important to recognize the compounding effect of physical environment and natural disasters on many of Africa's fragile economies. Many are landlocked, with poor infrastructure, and perilous diseases (including malaria and HIV) that undermine the development of human capital.

Reaping the benefits of reform, however, also depends on the successful engagement of African states with foreign national and regional institutions in the world economy. This engagement process becomes more beneficial as African states become more open to trade (Sachs and Warner, 1995, 1997); develop better institutional quality to promote change and manage external shocks (Fosu, 2000; Yilmaz and Gore, 2001); and secure access to global markets and investment opportunities. As African economies become more open and involved in international trade, compliance to foreign and international standards is also becoming more prominent an underlying factor driving export success, as the analysis in this book documents.

Economic development and trade expansion in Africa is also being shaped by policies external to African economies. Stern (2002) highlights some policy reforms that can and should be undertaken by high-income countries that will generate significant benefits for ordinary people in Africa and other developing countries. Some of these include (1) reducing agriculture subsidies;[2] (2) reducing the large number of high tariffs that restrict imports from developing countries, particularly where tariffs increase with the stage of production; (3) eliminating non-tariff measures that restrict trade including restrictive standards and technical regulation, rules of origin, and anti-dumping duties that too frequently target developing countries; and (4) removing restrictions on the temporary movement of natural persons supplying services.

In addition to these factors, Africa's debt burden further undermines its capacity for accelerated growth. The continent's debt burden is about US$200 billion, increasing from 62% of GNP in 1990 to about 66 per cent in 2000. Foreign direct investment has also been difficult to attract (Wohlmuth, K., et al—2000).

Considered together, these factors underline the uncertainty of Africa's current position and complicate policy reform initiatives. In this context, therefore, both foreign and local trade reforms are necessary for Africa to reap the full benefits of openness and trade liberalization. For these benefits to be sustainable, the empowerment of African public and private sector players to participate in international trade, foreign partnership, investment, and regional cooperation should be a fundamental part of Africa's development process. Included in this process is the need to improve global market penetration for Africa's agricultural commodities and light manufactures as a central defense against poverty. This is because most African countries are still primarily agricultural-based, with most states dependent on about two primary commodities for more than half of their export earnings. Here again, voluntary standards and mandatory technical requirements on food safety, animal, and plant health in importing countries play an important role. Additionally, Africa's

[2]In a speech delivered at the National Council of Applied Economic Research, New Delhi, November 28, 2002, Nicholas Stern, Senior Vice President and Chief Economist of the World Bank noted that the Organization for Economic Cooperation and Development (OECD) support for farmers is over US$300 billion—totaling almost one-third of all farm receipts. The potential impact of these policies on African exports has been highlighted in several New Partnership for Africa's Development (NEPAD) documents as well.

comparative advantage remains, in part, focused on the production of primary commodities (Wood and Mayer, 2001). Therefore, securing new and diversified agricultural markets that consolidate and increase Africa's trade position in agriculture products and light manufactures will have direct impact on the incomes of many Africans, indirectly improving their poverty situation.

Seeking access to markets alone is, however, not enough. In addition, significant investment-based growth (financing and technology transfer) that will improve product quality and production practices, and help overcome supply-side constraints that hinder competitiveness of African products prospects for export diversification, and other trade facilitation efforts, need to be improved. These constraints include good production infrastructure, better access to credit for technology-based expansion, reduction in subsidies in developed country markets, consistent policies that enable appropriate research, forecasting and competition, and private sector-led human capital development etc. These reforms need to be orchestrated in the context of more stable macroeconomic environments that are anchored in better fiscal discipline, high growth rates, and a greater degree of labor absorption.

African governments are conscious of these needs and are progressively prioritizing and stepping up efforts at widening intra-African market opportunities, as well as, trade with other developing and industrialized countries through trade liberalization. The most up-to-date attempt is subsumed in the "NEPAD Market Access Initiative" which underscores the need for effective participation of African countries in the World Trade Organization Doha agenda, anchored in successful regional integration, good governance, and increased productivity that would facilitate efficient exploitation of trading opportunities created by multilateral, regional, and bilateral trade agreements.

With a per capita GDP decline from about 1.3% per year in the 1980s to 1.8% per year between 1990 and 1994,[3] and real GDP falling from 3.2% in 2000 to 2.5% in 2002, Sub-Saharan Africa's development prospects hinge on its ability to create favorable conditions for growth and reduction in poverty (Rodrik, 1998; Collier and Gunning, 1999). Forecasts of growth estimates for 2003–2015 fall far short of the recommended growth target for a major turnaround. According to the World Bank Global Economic Prospects (2003), real growth in Africa is estimated to rise to 3.2% in 2003 and to about 3.8% in 2004, with per capita growth averaging 1.5% over the 2005–2015 period. Thus, to meet development objectives outlined in the Millennium Development Goals (MDG) alone, rapid and sustained improvements in good, stable and productive governance processes, macro-economic stability, consistent deepening of regional and international trade and investment opportunities, and diversification of exports and markets are very urgent and vital in Africa.

The development of trade, in turn, requires deeper penetration into global markets, development of supply capacity and competitiveness, and the strengthening of the institutional, human, and regulatory capacity for trade and trade-related policy design. All of these must be implemented in line with global demand and standards. Central to this process is the recognition of the changing roles of international, regional, and local trade standards and technical regulations, and the impact they can have on the expected benefits from Africa's attempts at trade promotion and integration.

Why Standards Matter for Africa

Understanding the link between standards, technical regulations, and trade is crucial in the design of broader development programs that can create new opportunities for pro-poor growth. Standards and technical regulations define what can (or cannot) be exchanged, and outline the procedures under which such exchanges are or are not permissible. Wilson (2001) discusses two broad categories of standards—product and process standards. Product standards define quality, safety, authenticity, etc. that goods should possess (e.g., minimum nutrition content of a food item, maximum pesticide residues on an agricultural product, and performance requirements for pieces of furniture or machinery). Process standards refer to the conditions under which products are produced, packaged or refined. Examples include the use (or absence of use) of particular inputs into crop or livestock production, the technical processes used for fishing, traceability requirements required for meat, and some horticulture products, management practices used for

[3]About 5–6% below the average for all low-income developing nations.

tree-felling and forestry management, and the work conditions of laborers. These process and product standards provide the premise for various categories of standards including rules that define labor, food, health and environmental standards.

In this volume, the term "standards" is used to refer to both voluntary market-driven standards, as well as, technical regulations. These standards, in principle, should be based on scientific evidence, and are designed to facilitate information exchange, ensure product quality, and the provision of important objectives or goods that are otherwise neglected in the private market (e.g., public health and safety). Standards and regulations can, therefore, improve quality of life, create shared consumption benefits for the public, and solve common product and quality problems. Well-defined standards can facilitate trade by reducing transaction and other costs (including costs of information about the quality of goods or services and associated risks), and to improve linkages among firms across industries.

Standards as a Prerequisite for Access to Markets

The process for formulating standards (national or international) can be complex, as well as costly. This is increasingly so as globalization drives more intensive international competition between firms across nations. Changing global market conditions now require firms to meet more refined, diverse and sometimes unexpected and personalized customer tastes and societal preferences. Consumer demand is represented by a mix of informal rules reflected in industry practices (i.e., voluntary standards), as well as formal rules crafted within the context of national regulatory frameworks (i.e., technical regulations). Many times, regulations codify, replace, or underline pre-existing voluntary practices within an industry—and as such, can be private sector-driven.

For many voluntary standards driven by consumer demand, failure to comply with such standards may hinder consumer acceptance, but not necessarily block access to specific export markets. For standards that are mandatory in international or national law (mostly technical regulations), failure to comply prohibits a product or service from being sold in a given market. However, due to global or local weaknesses in enforcement, such products may still find their way into the marketplace at discounted prices. In some cases, voluntary standards may have stiffer requirements than is required by regulatory authorities. Also conformity assessments are made in compliance to the demands of the buyer. For example, in the horticulture industry, some buyers now demand descriptions of environmental circumstances and the location in which a product is grown. This is creating opportunities for differentiation among producers that adopt specific environmental standards and those who do not. The consequence, however, is that such requirements may add to production costs (especially for small- and medium-sized enterprises) of firms supplying these markets, or entering new ones.

Standards as Determinants of Competitive Advantage

In addition to the benefits standards can produce, there has been increasing concern about the use of standards and technical regulations as discriminatory non-tariff barriers to trade.

Meeting standards involves costs—investments in equipment and staff to ensure compliance and costs related to proving conformity to standards. Public welfare costs may include the systems needed to determine and certify that products meet legal requirements set in national technical regulations. These costs are generally referred to as costs of compliance. For the bearer of these costs, changes in costs of compliance directly influence production costs, and may alter the relative gains that accrue to producers and consumers. This is particularly true for agribusinesses and other firms in related industries experiencing falling revenues due to a decline in traditional African exports commodity prices.

Standards as Instruments of Commercial Policy

Standards designed to ensure food safety, animal, and plant health are critical. It is important to design standards and regulations, which consider risk, best practice international science, and trade. The standards development process can result in excessively stringent levels of protection in favor of a dominant interest group where the participation of diverse other interest and commercial stakeholders is limited, or where a dominant group has initial bargaining strengths. This is because such a process may be shaped by protectionist intents of a dominant interest group—such as a cartel or monopoly

producer—which does not consider national welfare or consumer interests. When such standards form the basis for regulations, they may effectively block market entry, exclude competition, and consolidate and monopolize markets. Greater market power, in turn, may be used to influence the allocation of the benefits that may accrue from the use of these standards. Interest groups with less bargaining strength, and who are unable to participate in the rule-making process, become standards-takers. In many cases, they become bearers of the compliance costs associated with these standards.

Thus, when national government regulations and industry practices are designed to discriminate between sources of supply (e.g., through inefficient and duplicative national testing and certification requirements), they create secondary costs (or reduce gains from exchange) such that may restrict trade significantly. Furthermore, technical regulations that are not based on international norms (especially when they differ across countries) may limit trade by increasing costs of market entry. By extension, they can undermine global competition, shield local monopolies from foreign competition, divert trade, and impose severe costs on consumers. In addition, standards fragmentation may occur, where interest groups or countries tend to implement their own criteria even in the face of accepted international standards (e.g., CODEX) further complicates compliance costs and procedures for standards-takers.

Relative bargaining strengths and participation capacity are, therefore, two very crucial determinants of the outcomes of a standards development process. As a result, the improvement in effective participation and balancing of relative bargaining strengths among stakeholders involved in rules setting and enforcement is one of the central challenges facing current mechanisms governing the formulation and enforcement of trade rules today —including the World Trade Organization framework.

It is important to note however, that even when standards are universal and fair, compliance costs, especially those associated with upgrading production and infrastructure systems, and enforcement, may still differ significantly across countries. This is due to differences in institutional and financial capacity, infrastructure, human capital, consumer preferences and local conditions, and technological capacity, among other factors. This creates a gap between existing national standards and enforcement capacity in these countries, and those required internationally (termed "standards divide"). This is especially prevalent in many developing and low-income countries, and may alter the gains to compliance due to each country. Nevertheless, for firms and farmers in developing Africa to participate fully in the global marketplace, they must comply with acceptable international standards, and must therefore invest in compliance.

Standards and Trade in Africa: Some Prospects

In the case of sub-Saharan Africa, progress is undermined, in part, by trade barriers in the form of subsidies, tariffs, and other non-tariff barriers. These non-tariff barriers include rules of origin and increasingly stringent technical requirements imposed on traditional products (e.g., beef, aquaculture, banana, and peanuts) from developing countries including Africa. Some of these restrictions extend to manufactures (e.g., the European bans on the importation of electronically regulated earth leakage devices from countries like South Africa). There is increasing empirical evidence of the negative impact of these technical regulations and other non-tariff barriers to trade—especially in relation to phytosanitary and food safety rules.

Amjadi and Yeats (1995) have shown, for example, that the overall importance of pre-Uruguay Round non-tariff barriers is evident from the fact that approximately US$5.9 billion of OECD imports from Africa faced these measures. More recent empirical research at the World Bank also reviews the impact of standards on Africa's exports. In a case study of the trade effect of European food safety standards on African exports, Wilson and Otsuki (2001a) find that the new harmonized European standard on aflatoxin B1—a common contaminant affecting agricultural products—is estimated to cost African exporters over US$670 million per year in lost nut and grain exports.[4]

[4] "Saving Two in A Billion: A Case Study to Quantify the Trade Effect of Food Safety Standards," Tsunehiro Otsuki, John S. Wilson, and Mirvat Sewadeh, *Food Policy (26)* 2001.

In addition, (Wilson and Otsuki, 2002a) suggests that if governments followed international standards for pesticide residues in bananas, instead of national standards set by many developed countries, African banana exports would soar by about US$410 million a year. The same is true for beef. Research conducted at the Bankindicates that the adoption of science-based international standards for minimum residue levels of veterinary drugs could boost South Africa's beef exports by US$160 million a year. To summarize, by participating in international standards, and implementing acceptable international rules, it is estimated that Africa could gain up to US$1 billion a year from higher exports of nuts, dried fruits, and other agricultural commodities. These potential losses can be very costly to a continent with about 659 million inhabitants of which 300 million earn less than $1 a day.[5]

In further analysis of aflatoxin standards, Wilson and Otsuki show that the cost of not adopting a uniform international standard on aflatoxin (B1) is estimated at US$38.8 billion in lower global cereals and nuts trade. If the world were to adopt a standard (chlorpyrifos) at a level set in the European Union, instead of the one suggested by Codex—the body charged with setting global standards—there would be a US$5.3 billion loss in world banana exports. To summarize, there is evidence to suggest that losses associated with divergent national regulations may block African firms and farmers from entering new and diverse global product markets.

Furthermore, African firms and farmers have started to recognize and highlight the potential impact of technical barriers on their capacity to export. Preliminary results from a new survey of technical barriers to trade conducted by the World Bank, African firms confirmed that product quality and low demand are the most important factors that affect their firm's ability to export. See Box 1 on next page for a summary of these results.

The impact of standards and mandatory technical regulations to Africa's trade position can, therefore, not be overlooked. To participate effectively in global trade, African countries must develop the capacity to meet international standards. This in itself is a formidable challenge. Developing strategies to address these challenges requires targeted research to enhance understanding of the incentives, principles and constraints that influence production and trade in different products, economic sectors, and countries in Africa.

What about the WTO Disciplines?

The WTO Agreement on Sanitary and Phytosanitary Standards (SPS) was designed to help address some of the concerns that have been highlighted above. The Agreement seeks to promote transparency in the standards development process and promote principles of national treatment, nondiscrimination, and use of sound science as the basis for standards. Moreover, standards should be applied only when necessary to protect human, plant, and animal health.

The Agreement aims to (1) encourage the adoption of measures of scientific principles in the application of standards; (2) prevent discrimination between members when identical or similar conditions prevail, and reduce restrictions to international trade; (3) promote SPS measures based on international guidelines and common risk assessment techniques; and (4) encourage standards based on broad-based participation and consensus.

The SPS Agreement also provides a mechanism for addressing issues related to developing country capacity to meet compliance costs. Members agreed to facilitate the provision of technical assistance to developing country members through bilateral or relevant international agreements. This includes encouraging technical assistance in processing technologies, research and infrastructure, advice, credits, donations and grants for the purpose of seeking technical expertise, training and equipment, and the establishment of national regulatory bodies so that countries are able to adjust to, and comply with, SPS measures in their export markets. In cases in which substantial investments are required to fulfill SPS requirements of an importing member, the latter is expected to consider such technical assistance to the extent of permitting the developing country members to maintain and expand its market access opportunities for the products involved.

[5]Moreover, Africa's trade and investment with the US still lags behind the rest of the world. Sub-Saharan Africa accounted for less than 1% of total US exports and less than 2% of total US imports in 2000. Likewise, the region accounts for 4% of total imports from the EU.

Box 1: The World Bank Global TBT Survey 2003

The World Bank Global TBT survey has generated data sets from a firm-level survey of 700 firms in 17 developing countries (including the five African countries reviewed under ATSP) on standards and technical barriers to trade. The database, still under construction, includes important information from firms exporting agricultural products and manufacturers in a wide range of industries. It details information on cost structures, production and exports, impediments to domestic sales and exports, and operations to comply with regulations. Particular efforts are made in the survey to elicit information on the relevant standards, government regulations, and technical barriers to trade (TBTs) confronting exporters from developing countries seeking to enter developed country markets. The database is planned for release in 2003. Preliminary results from African surveys are summarized below.

In Kenya, preliminary survey results from the TBT Database confirm that product quality; taxes and tariffs in export markets, and low demand were the most significant constraints to exports from Africa. Low demand ranked the highest. Other key factors highlighted include access to credit and foreign marketing costs. In Mozambique, the surveys highlight somewhat similar conclusions. The most important constraints to Mozambican exporters are product quality, low demand, and port charges and delays. Others include lack of skilled labor and access to credit. Unlike Kenya, Mozambican firms do not consider tariffs and quotas in export markets, and foreign marketing costs as significant constraints. In Nigeria, freight charges and product quality are ranked highest in the variety of factors that affect ability to export. Other important factors include port charges and delays, access to credit, tariff and quotas in export markets, and low demand. Foreign marketing costs and taxes on capital also seem to be very important to a majority of Nigerian firms. In South Africa, product quality, freight charges, port charges, and delays are the most important factors affecting exports while product quality, access to credit, and freight charges are the most important to Ugandan firms.

Over 70% of all firms surveyed in all five countries except Kenya indicate that compliance to technical regulations is important to increase export sales. In Kenya, about half of the respondents acknowledge this.

These SPS provisions—if fully implemented—would be particularly important for Africa. There is already a divide between local standards that are in place in many African countries and those of their major trading partners. As a result, there appears to be two main challenges facing the continent. First, there is the need to *invest in national standards development, monitoring and compliance consistent with international norms.* The development of these systems of standardization, quality assurance, accreditation and metrology is a crucial platform for sustained long-term competitiveness. Second, there is a need to *develop effective approaches for improving the continent's participation in the international standards development landscape and monitoring framework so as to minimize unfair use of standards that will restrict exports from the continent*.

Africans, in concert with the development community, are exploring ways to rationalize the costs of these regulations, reduce the tendency for trade diversion or restriction inherent in their use, improve participation in the standards development process, and facilitate the harmonization of standards. This process must involve strengthening the capacity of the private sector (and related regulatory institutions that support them) in the export of higher quality products at competitive prices.

In this context, measuring the current status and limitations to standards development in Africa, vis-à-vis prevailing international standards development processes could clarify a number of important concerns.

Based on work conducted as part of preparation for this volume there are several priorities for

research in standards. First, gaps in African laws, policies, regulations, coordination, and monitoring systems governing quality of products and production processes need to be clearly identified, as a necessary step toward bridging the standards divide. Revealing these gaps should inform African governments as to whether their national technical regulations differ significantly from international standards. This would guide further empirical research on whether regulations depart significantly from the least-trade-restricting standards available for a given policy objective.

Second, identifying, assessing, and prioritizing the constraints to coordination and monitoring of standards-related activities at the country and sector level will facilitate the development of recommendations for reform. Developing actionable recommendations anchored in country-level and sector-specific analysis will serve very important purposes.

1. They will delineate activities African countries can embark on to ensure their firms and farmers take advantage of global trade opportunities by exporting products that meet internationally acceptable standards and quality.
2. These plans and underlying research evidence will provide concrete documentation of the needs of African countries and the challenges they face in exercising their rights—to inform the Doha Agenda of the WTO. Recommendations can then be crystallized into effective project ideas and policies that will pave the way for reform that can maximize trade-related aid to Africa.
3. Third, detailed analytical evidence can help to advance other objectives: (i) It can buttress Africa's position in trade panel meetings as well as dispute settlements, (ii) improve understanding of the various incentives and factors underlying Africa's capacity to participate effectively in global trade, and (iii) provide more information on how regulations operate in the African environment.

A critical evaluation of all these issues is best performed on a case-by-case basis. The analyses which follow adopt a country-by-country approach with an action plan for each country analyzed. Such a national agenda is important to strengthen the competencies and the capabilities of each country in meeting international standards. This will help identify opportunities for deeper reforms and strengthen the foundations on which a regional and global framework can be further developed.

Methodology and Scope for Analysis

This volume contributes to ongoing search for creative ways of strengthening Africa's capacity to comply with international standards. It identifies opportunities for strengthening relative bargaining strengths and participation capacity of five[6] African countries in the global standards development framework. It also identifies key capacity constraints that may prevent them from complying with international standards. Though the primary focus is on SPS issues, the authors also discuss other standards and technical regulations applicable to specific industry sectors analyzed in each country. Finally, the authors provide recommendations for each sector and country based on their analysis. These recommendations highlight opportunities for intervention and assistance that could enhance the compliance and participation capacity of these countries.

This volume combines research efforts of teams of African scholars and professionals that included trade specialists, economists, and standards experts. Each chapter provides in-depth assessments of the current and anticipated use of international standards, and capacity for compliance on a case-by-case basis for five countries in the region—including Kenya, Mozambique, Nigeria, South Africa, and Mozambique. The analysis also includes a case-by-case study of specific industry and commodity sector of economic importance within each country. This work highlights, in detail, the main challenges and constraints facing the private sector and supporting organizations specific to each industry or commodity sector studied.

The country assessments were developed to meet the following objectives:

(i) Build awareness on the range, importance, and impact of international standards and technical regulations on the current and prospective trade of selected African countries,

[6]Kenya, Mozambique, Nigeria, South Africa, Uganda.

(ii) Document the challenges and opportunities faced by these countries in meeting their international agreement obligations and faced by African firms and farmers in complying with official regulations and private standards,
(iii) Document and assess the performance of countries and industries (including firms and farmers) in responding to these challenges and opportunities, and
(iv) Identify areas of priority attention and potential modalities for strengthening public and private capacities to utilize and apply internationally accepted and recognized standards and technical regulations.

Particular attention was given to the role of standards and technical regulations in areas of high export potential in each country (e.g., agricultural and food products and light manufacturing goods like textiles, wood products, leather/hides/skins and footwear), together with the standards/regulations associated with important material inputs needed by these industries (e.g., seeds, fertilizer, agrochemicals, animal feed and animal health products, farm and manufacturing machinery, etc.). See Table 1 for a list of commodity and industry sectors covered.

Primary attention was given to laws, rules, and practices which pertain to health and safety objectives, while secondary attention was given to a variety of environmental standards/regulations, including those which have been included within international agreements or national laws and those which have been adopted as private 'codes of practice'. O Labor and related standards were not included in the scope of analysis in this work.

The chapters in this volume highlight instances where products have been banned or restricted from traditional markets on grounds of quality or safety.[7] A discussion is provided as to whether these circumstances were caused by actual developments within the country (i.e., a disease) or due to changes in the overseas market rules/regulations or a hiatus in those regulations (which resulted in a de-facto ban on imports). Specific cases were identified, such as where SPS measures have created compliance (and compliance cost) barriers for local producer/exporters; where overseas market standards (and testing procedures) are more stringent than those provided by international agencies (i.e., CODEX); and how this has materially affected the country's exports.

The authors also identify challenges these countries face in conforming to standards set by international industry-specific organizations (e.g., International Coffee Organization; forestry certification requirements, etc). The chapters include information on how problems can be addressed and estimates of compliance costs. Finally, the studies draw conclusions about the current status of legal frameworks related to standards and include recommendations on steps which should be taken by government, private organizations, and international development agencies to assist Africa. The authors in each chapter have drawn on broader economic analysis and other work ongoing at the World Bank and other organizations. Team-based research effort was also complemented by the use of national workshops, focus group sessions, and one-on-one interviews, and questionnaires which encouraged participation and input from key private and public sector stakeholders in each country.

An Overview of Challenges and Capacity Constraints

The focus on trade facilitation through standards in this volume is based on Africa's need to improve and secure access to world markets, which will in turn contribute to export-led growth. With domestic regulatory reform advancing in some African states,[8] the continent's potential for increased trade and investment with the developed world is growing. As the analyses in subsequent chapters demonstrates, capacity in the private and public sectors remains weak, even as globalization increases the need for innovative changes in the private sector and strengthened public sector institutions.

[7]For example, there might have been cases where fish exports were banned due to fear of listeria contamination; nuts/legumes/or spices banned for exceeding aflatoxin limits; or other cases.

[8]These reforms have not always been consistent. Collier 2000 points out several instances where policy reforms have been punctuated by disruptions and policy reversals.

Box 2: Liberalization, Commodity Prices, Coffee Standards

In Uganda, liberalization of the industry has been accompanied by increased involvement of inexperienced private sector players that compromise quality. This is exacerbated by the fact that compliance to codes of practices is voluntary, enforcement is weak, and penalties for non-compliance are not severe. Moreover, excess supply in international markets has depressed coffee prices such that there is little price incentives for investment in good quality coffee compliance practices.

Other industry constraints that must be overcome to spur growth in exports of high quality coffee include: (i) better treatment of aged coffee trees and prevalence of pests and diseases (e.g., coffee wilt); (ii) improvement in harvest handling methods at farm and primary processing levels; (iii) stronger enforcement at the production and primary processing levels (enforcement is weak due to unclear mandates among regulatory agencies); and (iv) decentralization of quality monitoring at the countryside to local authorities. This would require a new statute to be put in place to clarify the roles of various stakeholders in the process (ok)

In Kenya, with respect to monitoring quality, the previous quality monitoring functions of the Commodity Board in Kenya worked well, and as a result, Kenya coffee was sold at a premium in international markets. The main industry concern now concerns how liberalization of the sector will affect the efficacy of the transfer of responsibility of monitoring coffee quality standards from CBK to independent marketing agents, millers, and factory processors. KPCU is already taking the lead in soliciting and providing financial support to coffee farmers and factories to maintain quality. It is not clear how this new arrangement and regulatory framework will affect the coffee industry.

Realizing the potential for SME-based and export-led growth requires better and more systematic efforts to help African firms and farmers increase their capacity to export, produce internationally acceptable and competitive products, and overcome barriers to trade. African entrepreneurs, firms, and farmers may be successful at running small local businesses but many appear to be constrained from applying the same skills to challenges of dynamic global markets—especially in complying with international product and quality standards in a competitive manner. Moreover, for most African firms, the means of identifying, qualifying, and sustaining long-term export potential in international markets is difficult. Business support services are usually of relatively poor quality, lacking the timeliness and customization needed to support expansion in today's highly competitive global marketplace.

Just as African firms often lack the resources, links, and connections to effectively meet foreign and international product and process standards, so do African standards-setting organizations, monitoring agencies, and business support associations often lack the capacity and breadth of networks and services necessary to mount high-impact development programs that will create and sustain better market access for their member firms and farmers. Collectively, for many African countries, the support services offered by trade and economic development agencies seem to be inconsistent in delivery, and shallow in foreign market penetration, to stimulate rapid expansion of private sector activities. Specifically, in many of the countries and sectors reviewed in this volume, they are limited in outreach and slack in direct connectivity to the standards of those of their trading partners.[9]

Several country-specific constraints and challenges that limit compliance to international standards in Africa are discussed in subsequent chapters. Among the most common include:

(a) Participation: Until recently, complaints about standards (especially SPS) from African countries to the WTO have been limited

[9]Excluding in many cases South Africa.

(Wilson, 2001). As can be drawn from the case studies in this book, this is partly due to the fact that African countries participate less effectively in WTO and other foreign standards-making processes. They also have very limited capacity and means to gather, analyze, absorb, and implement decisions that emanate from these processes.[10] Though there appears to be standard protocols for cooperation between local agencies and enquiry points in Africa and their international counterparts, this cooperation is typically not sustained in a way that is strategically significant to meet the policy or commercial objectives of producers and exporters in many African states. This is in part because, unlike in many developed countries, the mechanisms, agencies, and resources with which African states sustain international trade negotiations appear to be underdeveloped, under-financed, and sparingly inclusive of the private sector and the civil society groups. This is changing as African economies pursue more vigorous private sector-led growth strategies. The case study on South Africa, for example, highlights instances in which South Africa has influenced the formulation of international standards. However, for participation to be effective, more African states need to be actively involved in the process, on a selective basis, on standards of high relevance to export markets.

(b) Standards-takers: Lack of participation, coupled with limited capacity to provide credible information needed to articulate and defend their interests and/or complaints has transformed many developing countries (African firms and farmers in particular) into "standards-takers"—reactive, as opposed to proactive, players in the international trade system. This position raises three main concerns for African firms and farmers: (a) as standards-takers, they are vulnerable to sudden or frequent changes in foreign standards, especially when such changes are orchestrated with protectionist intent.[11] This vulnerability is more precarious when standards are defined ambiguously and the requirements associated with them are unclear, scientific evidence is unresolved, and compliance costs are high; (b) Many times, their situation is exacerbated by simultaneous exposure to divergent, multiple standards imposed by various trading partners. Servicing several markets with varying standards increases production costs,[12] complicates testing

[10]Africa's capacity to challenge or defend positions on exports of fruits and vegetables (especially regarding issues like maximum residue levels and pest risk analysis) for example is very weak. This is partly because there is lack of human capital, financial resources, and information infrastructure to maintain the required data, testing, and knowledge management for over long periods, necessary to develop credible pest risk analysis. Serious concerns already permeate the fastgrowing horticulture and flower industry in Kenya and Uganda. These concerns are based on threats arising from the industry's capacity to comply with maximum residue levels, labor and environmental standards, and pest risk analysis required by its export markets. For example, it is believed that the new EU requirement of inspections against nonindigenous harmful pests does not accommodate unique climatic conditions of producing African countries.

[11]The South African study outlines that Spain rejected a few consignments of South African white fish in 2001 due to the so-called "parasite infestation." Similarly, during the early 1990s, Italy banned imports from one or two South African suppliers due to mercury content problems. These acts were seen as an undesirable consequence of differing microbiological standards across countries, which have not yet been harmonized at CODEX level. However, South Africa experienced the most severe problems in early 1994 when France implemented EU Council Directive 91/493/EEC. This is the main EU legislation governing the health requirements of fishery products. Though other EU member states had given third countries time to prove compliance with the requirements of the Directive, the ban was implemented overnight in the French market. This step came as a shock to the South African Fishing industry, which believed the French government, was trying to appease fisherman who had protested in Brittany to protest difficult economic conditions and cheaper imports.

[12]Especially when such markets demand compliance to process standards that may require different production processes for the same export product, e.g., Members of South African Circuit Breakers Industry (CBI), for example, have pointed out that while Europeans suggest that IEC is the basis of all CENELEC standards, CBI are obliged to test according to EU standards. Alternatively, multiple process standards may limit trade by reducing the incentive for exporters to access more than one market, and benefit from economies of scale that may accrue from a uniform international standard that harmonizes production processes and allow for access to multiple markets, e.g., it was after Ugandan and Kenyan fish firms suffered a ban from the EU that they decided to try out the US market. The transition was easier because fish exports to EU must comply with HACCP standards which are not required in the US market.

and verification procedures;[13] and increases the burden of proof unnecessarily; (c) Foreign standards (e.g., packaging, testing, or environmental requirements) may become moving targets. Local consumer and producer groups and their supporting agencies abroad can influence (if not monopolize) the development of standards and codes of practice and make them more stringent once their competitors achieve compliance.[14] It is important to note, however, that some middle-income African countries, such as South Africa, have developed strong capacities to influence international standards-setting, and in some cases have become standards-setters (for example, the SABS Mark and the timber industry).

(c) Information failure: As standards-takers, the lack of firsthand participation in the development of international standards and voluntary codes of practice makes African firms and farmers overly dependent on local standards development agencies for relevant information. While the Internet is building tremendous connectivity, current management practices and access to timely information from these agencies are inadequate, and suffer from varied quality levels. In some countries, where information management infrastructure is still weak (e.g., Kenya, Nigeria, Uganda, etc.), there is a primary reliance on surface mail and postage services as a key mode of information transfer. Such countries experience further delays in coordinating key activities between international standards agencies to national contact points. Collaboration and exchange of ideas on standards with their private sector counterparts is also limited.

The combined effect of limited private sector participation, and information failure in part, explains why export and business development initiatives appear to be one-sided and do not foster effective representation of the interests of African businesses abroad. As a consequence, private sector awareness and investment in standards appear to be low across sectors – even in South Africa. This has created demand for high impact awareness campaigns and the need for information centers from which information about standards and quality is readily accessible. It should be noted however, that some of the information failure stems from inefficiencies in management and information flow from responsible international organizations, notification points, and foreign governments themselves.

(d) Trade Limiting Impact of Standards: The importance of understanding the impact of standards in Africa is also reflected in the rising incidence of technical regulations as instruments of commercial policy by governments. Africa's private sector and trade development agencies have increasingly voiced their concerns on issues relating to restrictive use of standards for protectionist intentions. These concerns were implicit in the review of Chapter VIII in "African Positive Agenda" summary of meeting co-sponsored by UNCTAD. They have also been explicitly outlined in the "NEPAD Market Access Initiative" document (2002), which outlines Africa's position on market access issues. According to this document, African leaders highlight two important concerns namely: the subsidies offered by OECD countries to farmers, and restrictive regulation through product standards.

Empirical evidence related to these concerns has been highlighted in the previous sections. Other specific examples of standards that can be trade-limiting are found in the case studies discussed in this book. In the case study on South African horticulture industry, for example, the authors point out that quality and packaging requirements imposed by importers on South African exports of fruits can be excessive. For most South African citrus growers, the packaging requirements are said to limit the

[13]As in Kenya, South African citrus exporters have to comply with two certification systems (EUREPGAP and HACCP) in order to export their produce, and do not have a say in the setting of these regulations (Grieb 2002).

[14]In Germany, local firms refuse to purchase foreign electrical components, as labor unions do not allow their members to install these products. Similarly, in 2001 in Kenya, for example, processed foods from Del Monte were restricted from European markets because of worker safety and environmental standards. Human rights associations were agitated that Del Monte did not provide adequate safety standards to its workers and that environmental health standards were not adhered to. This led to a boycott of Del Monte's products in most EU supermarkets.

proportion of their total crop that they may export to about 60 percent. Similar constraints with regard to packaging were confirmed in other country case studies. It appears, therefore, that packaging requirements are becoming an area of strict concern in meeting international standards.

Another concern is regulation that limits the importation of fruits infected with citrus black spot (CBS). It is believed that this requirement will seriously constrain South Africa's exports of citrus fruits to Europe.[15] Other rules of concern include EUREGAP requirements relating to services provided to workers (e.g., washing facilities and portable toilets for every 600 meters in the orchard).[16]

Pesticide residue requirements in EUREGAP are also critical areas of concern. To comply with this requirement, pesticides that are used must be registered in the country of origin. In many African countries, including South Africa, many pesticides are either not registered, or are registered for another crop or commodity. Registration requires two to three years of costly trials. The costs associated with this process are so high that only those crops that are of high national economic importance are selected for plant protection and residue analysis. As a result, where the range of plant protection products of importance to South Africa differs from those of its trading partners in Europe, the latter may not support calls for maximum residue levels for certain pesticide and crop combinations that are of importance to South African industries. This may lead to the loss of use of certain pesticides and activities vital to the pest management strategy of many South African farmers. The South African deciduous fruit industry is particularly concerned about this problem.

CE marking[17] to EU regulatory requirements is also becoming an important and binding constraint. Where the intervention of a notified body is required, African firms are paying high fees to have conformity assessment work carried out in the EU. Although many African countries have safety regulations governing the manufacture and distribution of products, the enforcement of these regulations is weak with mixed quality across sectors. This, in part, explains the lack of recognition by EU regulators of the local conformity assessment infrastructure (i.e., the absence of mutual recognition) that obliges exporters to test and certify overseas. As a result, many African firms pay conformity assessment fees in foreign currency that increases production costs and make their product prices less competitive.

The challenge of conformity assessment is further compounded by certification constraints. In the USA for example, large retailers, such as Home Depot, insist on FSC certification. South African Industry leaders in the timber industry, for instance, consider the US market as particularly difficult to do business because the US product quality requirements are exceptionally high. For example, in terms of visual quality, US importers are only interested in clear timber without any knots. They also insist on sliced veneer and do not accept rotary cut veneer. This is of great concern to South African timber exporters because it limits their US sales to only a relatively small number of carefully selected.

[15]CBS is perceived to be difficult to overcome because the fungus that causes black spots on the fruits can develop at any stage of production even after export processes have been concluded. These spots are said to merely detract from the appearance of the fruit and are harmless to consumers. The fungus does not occur in any winter rainfall areas and has never shown up in the Western Mediterranean climate. Moreover, South Africa has been exporting citrus fruits to Europe for over 70 years without any serious health issues.

[16]It is unclear to South African citrus producers why such worker services are relevant to the citrus export exchange and they feel that this is rather a matter for resolution between them, the workers, the labor unions and the South African government (Grieb, 2002). As a result, these growers feel that many of the regulations they are being forced to adhere to are out of line with domestic norms, enormously time-consuming and unrelated to the core production issue—the quality of the fruit they produce.

[17]The CE Marking is the manufacturer's declaration, showing compliance with all applicable EU directives. For most products sold in the EU, the use of the CE Marking and a Declaration of Conformity are mandatory. Source: Website TUV-Rheinland.

The role of some lobby groups and associations were also found to impact trade prospects, at least in the short term. There appears to be an increasing demand among international customers for "social audits". Some customers require reports from inspection bodies that confirm that suppliers comply with local labor laws. In Kenya, for example, processed foods from Del Monte were restricted from European markets in 2001 due to concerns over worker safety and environmental standards. Human rights associations argued that Del Monte did not provide adequate safety standards for workers and environmental health standards were not applied. This resulted in a boycott of Del Monte's products in most EU supermarkets. Similarly, while many African countries like Kenya and Uganda struggle with the challenge of restructuring the fishing industry after several bans, some buyers in developed countries are already insisting on eco-friendly fish harvesting and processing on the part of suppliers.

(e) Costs and Financing of Compliance: Not only are standards potentially trade limiting; the cost of complying with them can be prohibitive depending on the type of standards applied, the development stage of industry or country of interest, and the efficacy of support services available to the local private sector. Preliminary evidence from the World Bank global TBT survey suggests, for example, that over 30% of all firms surveyed in Africa believe that compliance with local labeling requirements costs less compared to compliance with foreign regulations. The same goes for testing and certification costs. In Mozambique, however, 50% of Mozambican firms indicate that certification costs for complying with foreign regulations are much more expensive than those for local certification requirements.

The results also show that African firms experience additional costs as a result of investments in new equipment, labor, and inspection activities related to compliance to international standards. A majority of the new investment costs range from 1–24% of total investments costs. Inspection and additional labor costs also fall within 1–24% of production costs. The data also suggests that Mozambican and South African firms experience costs associated more with *new equipment* and inspection services while firms in Uganda and Kenya face costs related more to *labor* and inspection services. This may have to do with the compliance strategies different countries adopt. These results however only show cost averages of all firms over a variety of industries.

Compliance costs differ across industries depending on the stage of production practices prevalent in the industry, and the level of support services available nationally to help the private sector adapt to changing global industry standards.

In the case of the Ugandan honey industry, for example, sunk costs associated with compliance are found to be very high. The Uganda study references a feasibility report, referenced from the study contained in Chapter 5 of this book which suggests that up to US$300 million, will be required for construction of processing facilities and the purchase of equipment necessary to upgrade a honey-processing center owned by Uganda Honey Association in Kampala. These purchases would allow the Uganda Honey Association to conform to ISO standards for food safety. This amount excludes the costs of airtight collection cans and protective gear needed by farmers, setting up of local centers to train farmers in apiary management systems, improving awareness, and upgrading production processes.

In the Ugandan coffee industry, the average firm's production costs are said to increase by about 200% if compliance costs for good quality coffee are included. In South Africa, The costs to comply with EUREPGAP (at two pack houses for example) have been estimated at R1, 290,000 (i.e., R1, 000,000 million for the new bar coding machine, R170 000 for a pack house upgrade and R120 000 for relocating the workshop to comply with EUREPGAP—Bakker, 2002). Similarly, the Department of Trade and Industry in South Africa, which currently receives only about US$3,154 million annually, has expended significant amounts of money to upgrade the national metrology laboratory over the past six years. This is done to ensure South Africa's measurement standards are at par with those of its trading partners.

Financing such investments in compliance can be extremely costly and problematic for

African countries, especially where aid flows have dropped by about 40% in the last decade, savings rates are low, foreign direct investment is limited, and access to local credit is costly and predominantly short-term. The textile industry in Kenya and Nigeria, for example, is seriously constrained by availability of financial resources to develop better cotton-seed development systems, plantations and farming practices, ginneries, and a garment industry that will enable the industry take full advantage of the Africa Growth and Opportunity Act launched by the United States to ease access for African products (including textiles) into the US market.

(f) Constraints to SME performance: Standards impose different cost structures and investment requirements that can undermine the ability of small- and medium-sized farmers in Africa to access developed country markets. For example, analysis of flower production in Kenya shows that the costs of flowers (e.g., Roses and Carnations) that are grown in high investment structures and green houses, and are required to meet the stringent standards of the importers/consumers, are ten times higher on average than costs of flowers (e.g., Carthamus and Solidago) grown under normal field conditions. However, the export price of Carthamus is said to be only 50% less than for Carnations. In South Africa, while compliance costs do not seem to constrain multinationals and large local companies from adherence to domestic or international standards, the government had to devise various finance and technical assistance schemes to help SMEs cope with the required upgrade of equipment and facilities, and related costs of conformity assessment requirements.

Strict adherence to the "analytical zero" pesticide residue requirement imposed by the EU may have serious cost implications for Kenyan and Ugandan firms, especially SMEs, if not backed by adequate technical and financial assistance to pursue compliance. If this results in another ban on Kenya's or Uganda's horticulture products, such a ban will have significant negative effects on the economy of these countries and greatly impact the livelihood of their citizens. Horticulture industry is the third most important source of foreign exchange US$180 million yearly for Kenya, and a major source of employment. Flowers contributed 53% of the annual earnings from the horticulture industry. Complying with standards intensifies competition and, along with constantly changing consumer demand for flowers, makes continual investments in upgrading skills and equipment critical to business success.

Awareness of SPS measures and access to information is problematic among SMEs in the countries studied. This is based, in part, on incentives and market structures prevalent in the specific industries examined. For example, the case study on the fruits and vegetables sector in Kenya confirms that: (1) Large producers with direct contacts with exporters have higher levels of awareness of standards required by export markets compared to small producers; (2) Market channels based on forward contracts with farmers create more awareness about standards as opposed to informal contracts. Production contracts also provide a higher level of awareness of standards to producers; (3) The presence of exporter agents creates more awareness about standards to producers as opposed to independent agents; and (4) Exporters who sell directly to consumers rather than importers provide more value-added services, are more aware of standards required by export markets, and demand that their producers meet these requirements.

To summarize, the lack of rural infrastructure, high transportation costs, insufficient support services, and limited access to technical information and credit, constitute major problems for smallholders in the agriculture sector. Installing the necessary traceability, labeling, and packaging systems is also important and have significant cost implications for SMEs in Africa.

(g) Experience with standards-related product bans, and the difficulty of the adjustment process: It appears from the case study evidence presented here that the susceptibility of African firms and farmers to bans, product rejections, and trade-limiting restrictions varies by country, industry size, and development stage. Fish exports from countries like Nigeria, for example, have not experienced industry-wide fish bans. Interviews with experts in the Nigerian fish industry suggest that this is because the industry

focuses on minimally processed exports of frozen head-on shrimps, and have adopted good fishing practices. There are concerns that incidences of product rejections may increase as firms move up the production ladder into processed fish products. The experiences of fish farmers in Southern and Eastern Africa have been very different.

The case study on Uganda, for example, indicates that the loss in reduced revenue as a result of a fish ban from March to July 1999 alone is estimated at about US$36.9 million. This excludes the loss to fishermen due to reduced prices and fishing which could total approximately US$1 million per month. Out of 11 factories, which were operational before the ban, three closed down and the remaining factories operated at 20% capacity (Waniala, 2001). The decline in production resulted in about 60% to 70% of those directly employed in the industry losing their jobs. About 35,000 people involved in fish-related activities (e.g., fishermen, fish mongers and transporters) lost their jobs. Others indirectly employed through the industry had earnings reduced by one third of their pre-ban earnings. Related industries, such as packaging and transport were also negatively affected.

Individual firms have to make continual investments to comply with quality requirements. For example, over the last three years, additional cost in equipment has ranged from US$12,000 to US$13,500 for a representative fish firm in Uganda while the training of personnel on fish processing and handling cost from US$2,500 to US$5,000. The initial cost of certification was US$15,000 for each individual firm while the hired testing and certification services ranged from US$2,000 to US$4,000 over the same period. These costs were born by firms themselves apart from the training provided by development agencies such as UNIDO, USAID, and the World Bank.[18]

(h) Potential limitations to intra-regional trade in Africa: Overall, constraints to regional trade range from lack of infrastructure and credit, to restrictive trade policy, dysfunctional governments, political instability, and language barriers. There have also been instances where standards and technical regulations have been used to limit trade. Diverse and non-transparent national standards and implementation procedures may further limit cross-border trade, especially in Africa where the capacity to undertake risk assessments is very low—even in middle-income countries like South Africa. Lack of transparency creates potential avenues for trade-restrictive practices in the region. For example, an incident of a Kenyan ban on imports of one-day old chicks from Mauritius because of alleged detection of *Avian Encephalomyelitis* in two shipments was not backed by appropriate test evidence or detailed risk assessment. No notification of the action was made to the WTO by Kenya. The matter was settled before the case reached WTO's dispute settlement body.

Enforcement of standards within the region is also difficult, due in part to porous borders that support a significant volume of informal exchange of goods by small traders. While African firms seem to be indifferent about the extent of uncontrolled informal trade, this trend, if left unchecked, reduces the effectiveness of standards monitoring and traceability mechanisms (including quarantine and pest monitoring programs, surveillance and monitoring of data on disease spread, etc.). This increases the risk of the spread of product defects or diseases that can undermine industry reputation across countries. In Mozambique for example, there is the need to reduce aflatoxin and mycotoxin contamination (like hepatic diseases) that affect consumers of peanuts, but the volume of informal trade in peanuts that by-passes quality controls is very high. On the other hand, vaccination campaigns, coordination with neighboring agencies, and the introduction of geographic information systems have helped Mozambique to escape episodes of foot-and-mouth disease experienced by its neighbors.

[18]Note, however, that these investments have been beneficial since they played an important role in getting the ban lifted and increasing fish exports. For example, fish exports increased from 14,075 tons before the ban to 28,119 tons after the ban. This increase is partly attributed to the compliance to standards that enabled Ugandan fish and fishery products being upgraded from List II to List I. Kenya's fishing industry has also undergone similar changes, but has not been as successful as their Ugandan counterparts.

(i) Other Domestic Constraints: Four very important areas for capacity building are evident in all of the country case studies. First are institutional constraints. There is an increasing need to strengthen the capacity of institutions involved in monitoring compliance to national and international standards. This is particularly important in Africa where liberalization and subsequent dissolution of commodity boards (in the absence of strong monitoring institutions) appears to have undermined the quality of agricultural products.[19] Streamlining the roles of agencies creates better focal points of responsibility and competent authorities to implement and monitor standards critical for compliance. Proliferation of duplicative roles and responsibilities was found to be one important cause of declining quality systems in the countries reviewed.[20] Furthermore, many of the institutions examined in the studies still lack the necessary sophistication and equipment for making adequate assessments of compliance and certification is still largely performed externally. There is the need for technical assistance and physical infrastructure upgrades to promote public–private partnerships in transforming standards into production techniques and good agricultural practices.

Second, capacity to undertake Pest Risk Analysis (PRA) and develop adequate traceability systems needs to be strengthened. Almost all of the countries under review lack the personnel, financial resources and technical details necessary to undertake comprehensive PRAs required for exports of their horticulture products. PRAs are of particular concern to Uganda and Kenya, two countries with a high growth and dependence on horticulture and flower products. While technology and testing methods are becoming more complex facilities such as testing laboratories are not adequately staffed in many African countries. Scientific equipment is outdated. Systematic collection and storage of records is not undertaken. Moreover, local certification agencies are not internationally recognized. This situation is worsening given the declining levels of public expenditures in many countries. Middle-income countries, such as South Africa, have good facilities, but PRAs are done by a small group of personnel faced with a large backlog of work.

Third is transport and logistics. Packaging, marketing and distribution of agriculture products from the production point to the final consumer is a formidable challenge in Africa. As shown in Table 1, port charges, delays, and freight costs are significant constraints to exporting. The availability of adequate transport and logistics infrastructure and management greatly affects market delivery quality of products, especially where such products are perishable. The publication "List of Detentions", published by the Unites States Food and Drug Administration (USFDA), for example, reveals that the main reasons for detentions from Africa was that the food exports from the region were mostly rotten.[21]

(i) Limited Incentives for Investment in Compliance: Incentives for investing in compliance can be policy- or market-related. Though the case studies did not explore policy incentives for compliance in detail, some examples are provided. In certain instances, such as in Uganda's coffee industry, policies and incentives provided to farmers do not encourage investments in compliance, and may sometimes hinder it. The case study points out that coffee farmers

[19]The authors of the Nigeria case study, for example, argue that the absence of institutions that perform the quality functions of the defunct commodity boards was one of the main reasons for deterioration of the quality of cocoa and cocoa products. There are concerns about the impact recent liberalization of the Kenyan coffee industry will have on the quality of Kenyan coffee exports.

[20]In Kenya, for example, a lack of a unique focal point on fish quality monitoring and compliance was found to be one of the causes of the country's deteriorating fish export quality. The loose organization of farmers within associations also undermines their capacity for organization and deployment of technical assistance that can help these farmers comply with required good agricultural practices and standards. The quality of organizations and associations involved in standards monitoring is mixed.

[21]Veena, Jha, "Strengthening Developing Countries' Capacities to Respond to Health, Sanitary and Environmental Requirements." A Scoping Paper for Selected Developing Countries, April 2002.

have an incentive to invest in lesser quality coffee production processes because the regulatory penalty against low quality coffee suppliers are so small in magnitude compared to costs of investment in better processing facilities. Moreover, there appears to be little price incentive because the market price premium for higher quality coffee is minimal. However, in the flower and fish industry, in both Uganda and Kenya, investments in quality appear to be compensated through higher market prices. In the fish industry, investments in compliance have resulted in increased exports from Uganda to the EU (but not in the case of Kenya). The market in this case appears to have rewarded compliance with higher market share. It appears that these premiums, if any, accrue to producers of high-end value commodities or marketing agents closer to the retail end of the production process (i.e., retailers and supermarkets in Europe).

The low volume and quality of local demand in Africa may also diminish a firm's interest in investing in compliance, and may sometimes compel national agencies to develop standards that are lower than international norms. For many African firms, producing for the local market is a necessary first step in the export process. However, in meeting demand in the local market, the producer sacrifices quality for price that is affordable to the local consumers. This low local demand for quality is due, in part, to the poverty that pervades sub-Saharan Africa.

There are other issues to consider in regard to standards and enhanced market access. Some of the most prominent include: (1) intensifyied efforts to harmonize standards and technical regulations to reduce duplication of efforts that restrict trade. Underlying harmonization is a number of necessary first steps. These include harmonization of threshold limits across developed country markets, streamlining testing and certification requirements, improving transparency in the development and implementation of standards and technical regulations, and supporting a more balanced global standards development framework that encompasses the input and participation of more developing countries; and (2) Until recently, most trade promotion programs and development assistance have not focused on the development of better quality systems needed to sustain trade. The ideas proposed in this volume suggest, supporting developing countries in their efforts to bridge existing standards divide deserves much more focused attention. This attention is already forthcoming. For example, G8 member countries, through the Africa Action Plan (2002)[22] have already pledged support in helping African states develop better capacity for trade, including in SPS and other issues related to technical regulations.

Section 3.4 of the G8 Africa Action Plan focuses on: Increasing the funding and improving the quality of support for trade-related technical assistance and capacity-building in Africa—including (a) supporting the establishment and expansion of trade-related technical assistance programs in Africa; (b) supporting the establishment of sub-regional market and trade information offices to support trade-related technical assistance and capacity-building in Africa; (c) assisting regional organizations in their efforts to integrate trade policy into member country development plans; (d) working to increase African participation in identifying WTO-related technical assistance needs, and providing technical assistance to African countries to implement international agreements, such as the WTO agreement; (e) assisting African producers in meeting product and health standards in export markets; and (f) providing technical assistance to help African countries engage in international negotiations, and in standards-setting systems. The continuous marginalization of Africa from global trade creates an unprecedented need to expedite the implementation of this action plan.

The action plans and ideas expressed in this volume provide concrete examples of the type of technical assistance and domestic reform measures needed to strengthen economic performance in Southern Africa. In addition, they can also serve to inform specific projects that might be implemented through the new Standards and Trade Development Facility (STDF)

[22]The Africa Action Plan was released at the G8 Summit in Kananaskis in 2002.

established by the World Bank, World Trade Organization, UN Food and Agriculture Organization, World Health Organization, and international standards organizations to strengthen coordination in technical assistance on standards. The work in this volume and through the project supported by the U.S. Government Trust Fund at the World Bank has contributed to the rationale and underpinnings of the facility's establishment. The activities of the STDF will complement ongoing trade facilitation efforts in each country towards greater access to global markets. Related work in other development agencies and African institutions has also been highlighted in the subsequent chapters of this book.

A Summary of the Country Case Studies and Action Plans

The subsequent chapters of this book discuss the challenges and opportunities Kenya, Mozambique, Nigeria, South Africa, and Uganda face in conforming to the standards set by international industry-specific organizations (e.g., International Coffee Organization; forestry certification requirements, etc.). They also draw conclusions about the current status of laws, regulations, capacities, and programs in relation to standards and technical regulations, and identify areas for priority attention and recommend key steps, which should be taken by government, private organizations, and international development agencies. A summary on each country is provided below:

1. Kenya

International standards are important for Kenya because merchandise trade contributes to about 40% of the total gross domestic product (GDP). The impact of international standards will be felt more in the agricultural sector, particularly if they have a negative impact on trade.

The mandate of coordinating standards development and implementation lies with the Kenya Bureau of Standards (KEBS), a public body set under an Act of Parliament. The KEBS is also the focal point for information on international standards development from bodies such as Codex Alimentarius Commission (CAC). Three other public bodies are also involved in standards development and implementation. These are the Kenya Plant Inspectorate Services (KEPHIS) and Department of Veterinary Services (DVS) under the Ministry of Agriculture and Rural Development (MA&RD), and Ministry of Health (MOH).

The KEPHIS is responsible for standards related to health of plant and plant products and is the enquiry point for the International Plant Protection Convention (IPPC). The DVS is responsible for standards related to health of animals and animal products and is the enquiry point for the Office of International des Epizootes (OIE). The MOH is responsible for standards related to food safety and is an enquiry point for both CAC and OIE on matters related to food safety. There are also many other public and private organizations involved in standards implementation particularly in creating awareness about the required standards for various products. These organizations get involved in standards development through their membership in committees for standards development coordinated by KEBS.

Most standards for Kenyan products are set based on international standards or guidelines developed by CAC, OIE, and IPPC. This is possible through participation of Kenyan technical staff in some of the meetings held by these organizations or use of guidelines and procedures provided by the organizations. However, not all Kenyan standards conform to internationally accepted standards. This is partly because of constraints in financing attendance in international meetings by both the public and private sector officials involved in standards-setting. Failure to participate in international meetings inhibits institutional development, capacity building, sensitizing and educating both the public and private sector individuals and firms on standards implementation and conformity assessment schemes that guarantee acceptance of international standards.

Different bodies undertake different functions in the administration of standards and implementation of standards. The notifying agency of standards developed in Kenya to WTO is the Ministry of Trade and Industry (MTI). All the enquiry/focal points (KEBS, KEPHIS, DVS, and MOH) communicate the status of standards in the country to WTO through MTI. The government has also established a National WTO Committee to coordinate preparations for negotiations of WTO agreements. Within the national committee, specific sub-committees

are established to deal with various WTO agreements such as the SPS and TBT Agreements. Besides the enquiry points, many public and private sector organizations are also involved in implementation of the standards. Some of the problems encountered in administration of standards are poor coordination among the various actors and weak information flow regarding international acceptable standards and practices among the various actors.

Capacity building efforts in standards particularly related to the SPS and TBT agreements of WTO have, in the past, focused on understanding these agreements. The government, through the National Subcommittee on SPS and TBT, implements these efforts. The focus has been to create awareness among stakeholders on the need for compliance with quality standards for products if they have to be competitive in the export markets. Some capacity has been developed at KEBS, KEPHIS, DVS, and MOH for standards development through formal training. However, this capacity is insufficient to deal with risk analysis (associated with food safety, and health of animals and plants and their products) in conformity with risk assessment methodologies promulgated by the relevant international organizations. Potential exports (e.g., beef, flowers, vegetables, and fruits) are restricted to markets because of significant disease or pests. In addition, the infrastructure for assessing required standards for animal and plant health is deficient.

Kenya faces constraints in implementation of standards and production of products that make it difficult for the country to comply fully with international obligations related to standards. Implementation constraints include: (a) alignment of domestic technical regulations with international standards. For example, standards for processed fruits and vegetables provided for by the KEBS Act are weaker than international standards; (b) weaknesses in export and import certification systems. Examples include weaknesses in certifying livestock products for export to European Union, Japan and USA markets and imports of textiles into the country; (c) inadequate testing capabilities including international accreditation for some laboratories involved in microbiology and chemical tests for foodstuffs; (d) risk analysis and surveillance programs for pests, diseases, chemical residues and food safety; (e) control and eradication of pests, which, for example, has restricted exports of beef products; and (f) production constraints including infrastructure weaknesses and different standards requirements for different markets, which make it difficult for producers and exporters to meet the required international standards.[23] Standards have had different impacts on Kenyan industries. Examples from coffee, horticulture (fruits, vegetables, and flowers), fish, and textiles industries are used to illustrate these differences.

The Coffee Industry. in Kenya has undergone major reforms with liberalization of the Kenyan economy in 1993. New entities (processing factories, marketing agents, and millers) have emerged from formerly government-controlled institutions that were charged with standards implementation. These organizations are adjusting to a new legal framework and they require technical support (financial and human capacity) to deliver better services to farmers. The costs of standards compliance for the coffee industry vary. At the production level, annual coffee production costs, which include methods that allow compliance to standards, range from US$600 to US$1000 per ha. Other costs are incurred at the processing levels and range from US$158 to US$770 per ton of coffee for factory processing and US$100 per ton for coffee milling.

The Horticultural Industry. (fruits, vegetables, and flowers) has expanded significantly in recent years. It is the second most important export industry for the country after tea. The industry is reasonably well organized with respect to production and marketing arrangements. Stakeholders (producers, exporters, and private sector organizations) coordinate the activities of the industry, which include advice on implementation of standards of the produce for the export markets. The major challenges in standards are the ability to meet the minimum residual levels (MRLs) in the export markets, pest

[23]For example, the poor transportation network which leads to long transportation periods for fresh horticultural products from production to exporting points necessitates investments in cooling vehicles for transportation of the produce and storage facilities at the ports of export to maintain standards for fresh produce required at the export markets.

risk analysis, and continually changing consumer preferences (e.g., adherence to socially and environmentally sound production methods).

Cost of Compliance Estimates Vary by Commodity. The compliance costs to meet these changing standards vary with the level of intervention and type of crop grown. At farm-level, farmers are required to invest in capacity, to advise, and to inspect the produce for good agricultural practices. This costs about US$2,000 per month for a production capacity of five tons of fruits or vegetables or ten tons of flowers daily. Investment for quality controls from the farm to port-of-export for the same tonnage of fruits/vegetables or flowers, respectively costs about US$123,000. This kind of investment is only affordable to large commercial farmers. Small growers are only able to achieve this through group investments or contracts with large-scale growers.

Fishing. is an emerging export industry for Kenya. The industry has faced problems with standards compliance, however, and fish exports have been banned to European Union markets in the past few years. This is because of weak hygiene and sanitary standards at fishing landing beaches and capacity (human and equipment) to examine and certify the quality of exported fish. The compliance costs vary with the level of intervention. However, the government has developed a new institutional framework to overcome these constraints. At the beach levels, about US$90,000 is required to develop the necessary infrastructure (clean water, drainage, insulated boxes, electricity and roads) per beach to maintain required health and sanitary standards. At the processing level, the costs of maintaining standards for management of Hazard Analysis Critical Control Point (HACCP) are estimated at about US$19,200 per fish processing firm.

Cotton and Textiles. The cotton–textile industry has undergone different phases of development since independence in 1963, starting with rapid growth in the 1960s to mid-1980 and a decline in the 1990s. The focus currently is to revive the industry to exploit emerging export market opportunities such as those offered by the United States through the African Growth and Opportunity Act (AGOA). Quality cotton production is hindered by lack of quality seed to farmers, sustainable disease and pests control methods and weak ginning facilities. A good cottonseed development and distribution system that ensures provision of quality seed and other inputs to farmers, as well as, an efficient marketing system for cotton lint is required to solve these problems. Textile manufacturing is also constrained by use of obsolete technology, machinery and equipment. Another issue is the weak legislation to control imports of substandard textiles. The compliance costs for maintaining standards vary with each level of intervention. At farm level, the compliance costs relate to costs of production and vary from US$100 to US$200 per ha. At the ginning and manufacturing levels, costs of investing in ginning and manufacturing capacity varies depending on size of factory.

In conclusion, Kenya has the basic infrastructure for implementation of standards to facilitate international trade in agricultural commodities and agro-industrial products. The constraints in the system, however, include (1) lack of funds to attend international meetings for standards development; (2) capacity to define appropriate standards for the country and undertake risk analysis in food safety, and health of animals and plants and their products; and (3) implementation of standards. Thus, public programs are recommended to support public institutions in formulation, development and implementation of standards as well as making it possible for the country to comply with WTO SPS/TBT requirements.

The major constraints in implementation of standards are a lack of technical knowledge and limited funding to enable farmers, particularly small farmers, to maintain required standards. Thus, commodity support programs that could empower producers to meet the required standards in the production and marketing of different commodities are recommended. The focus is on small producers that are not able to invest in facilities to enable them to meet acceptable international standards. The recommended projects in the chapter on Kenya target the constraints faced by each industry such as accessing export markets or financing facilities required for achieving acceptable standards in the markets. The priorities in Kenya center on small-scale producers of horticulture, fish, cotton, and coffee, and associations for the production of these commodities. These projects could be useful in contributing toward poverty alleviation in rural areas, as identified in Kenya's recent Poverty Reduction Strategy paper (PRSP, 2002).

2. Mozambique

Mozambique's infrastructure, export performance, and quality standards development has been significantly affected by the country's civil war. As a result, the main objective of Mozambique's post-civil war national programs and policies is the rebuilding of its infrastructure and reduction of the level of absolute poverty. The government program for 2000–2004, as well as other national programs and policies in agriculture, industry and trade, recognize the need to increase the quality of domestic production and to assure consumer protection through the development and application of appropriate standards and technical regulations as a necessary step in alleviating poverty through trade.

Mozambique's industrial and commercial policies consider the importance of developing the national quality system according to international rules. However, though quality and standardization issues are reflected in several documents, they are not yet the subject of appropriate development programs, neither at government nor donor level. Quality is not yet prioritized by the private sector as a requirement for international market access, though the development of important projects like the Mozal project have encouraged some companies to invest in product quality and related issues.

National Standards System. The Mozambique study examines the challenges facing the country's producers of peanuts, salt, cotton, horticulture, and fish products. The need to take a more systematic approach to quality led to the establishment of the National Institute of Standardization and Quality (INNOQ) in 1993. The establishment of the institute followed the perceived need to monitor regional and international developments more closely and to support local firms in efforts to improve quality. The standards-setting system is coordinated by INNOQ. Various bodies participate on the development of standards either on a voluntary or a mandatory (technical regulations) basis. The national standardization program includes issues that are regional priorities (such as labeling of foodstuffs, fruit and juices) and products that are national priorities (such as copra, honey, sugar, tea, and cashew nuts, among others).

The Cotton Industry. Some major constraints identified in the cotton industry include: degeneration and low yields of cotton varieties used for more than a decade, influencing production yields and product quality, for example. Other capacity priority areas for improvement include public investment in roads and transportation systems, limited capacity to assist small farmers and immediate response to their needs; a low level of farmer education, reducing their capacity to work through associations and groups. Obsolete equipment in ginneries, with low productivity and frequent breakdowns are also significant problems. There are also clear financial constraints hampering the investment that private companies need to make to assure a more efficient and effective service to farmers and deterioration of public laboratory equipment and tools.

Peanut Industry. Peanuts are cultivated by small farmers in all provinces, and are part of the staple diet in several regions, particularly in the south of Mozambique. A significant volume of informal peanut production is not covered by quality controls. There are potential export markets for peanuts that require certification to aflatoxin limits that are often below the average content in local products. Reducing this and other mycotoxin contamination in peanuts is a significant challenge for Mozambique farmers. Progress in this area would not only impact opportunities for exports but also domestic sales, as individuals are more at risk with higher levels of contamination as if infected with hepatitis. Various extension services and research to support better varieties and production methods that may reduce aflatoxin contamination have been implemented with varying degrees of success, and there is increased demand for the use of better testing and decontamination methods, and improved storage facilities.

The Fish Industry. The fisheries sector is one of the most important contributors to the Mozambican economy, representing 27.7% of Mozambique's total exports in 2000. Prawn exports rose from 5,694 tons in 1994 to 9,729 tons in 2000. The total harvest of fish and seafood in 2000 was 39,065 tons and the estimate for 2001 is 32,781 tons (Ministry of Fisheries). Over the past 10 years, prawns account for 21%–38% of the total catch of fish and seafood. Investment opportunities in the fisheries sector lie primarily in the need for a gradual replacement of the fishing fleet and upgrading testing laboratories.

Training for middle- and senior-level staff of the various bodies and companies will also be necessary. Existing regulations also may need to be revised in some aspects.

Mozambique's legal and regulatory framework also needs to be updated and new legislation and regulations introduced. A brief analysis of the institutions responsible for the application of legislation shows that institutional capacity has increased in recent years. With regard to research institutions, the establishment of a Ministry of Science and Technology to develop programs that will enhance research capacity in the country is ongoing, and supervision activities in some other Ministries are being improved. MADER is also reorganizing its research institutions. There is limited capacity to enforce existing technical regulations. The quality inspections at the border and in shops are not efficient because of the lack of infrastructures and personnel. Laboratories are not well-equipped and they face the same problems as the other public institutions.

Mozambique has also participated in standardization activities in the SADC region. The business community, however, needs to be more involved in the development of Mozambican standards. Prioritizing standards-related activities is a major challenge for Mozambique. Consumers, in general, do not demand quality, volume of production is low, and the few export products are guided by specification requirements for different destination markets. Weights and measures inspection in Mozambique is virtually non-existent and the infrastructure that would create confidence in the accuracy of measurements in the country is only now being developed. There is no formal sub-system of certification except for some government bodies which carry out preliminary inspections.

Certification. In addressing certification constraints, INNOQ has established cooperation agreements with its Portuguese counterpart the Portuguese Association for Certification (APCER)—and with the South African Bureau of Standards (SABS), aimed at starting joint activities in certification. Private sector adoption of the ISO 9000 standard is also encouraged and under way. Three firms, in the service sector, have been by ISO 9000-certified standards, one by SABS and two by APCER. However, cement is the only Mozambican product certified by SABS. Certified companies utilize accredited laboratories and calibration services from South Africa, but costs are high. There are also serious attempts at securing approval for a national conformity mark. This will, however, require better service quality from national laboratories. Accreditation is being managed within a regional context, with national focal points designated to address regional accreditation issues.

Consumer Interests. Mozambique has three organizations representing consumers' interests: PRO-CONSUMERS, DECOM and the Consumer Protection Institute, the first two being very active. These consumer associations have seats on the various committees and working groups dealing with standardization and metrology. The associations are newly established and lack the technical capacity to become more active in this aspect. The government has selected Intertek Testing Services to carry out pre-shipment inspections, while SGS performs inspections of exports, which is contracted by a third party. It is believed that the growing need to follow international standards, the SADC Trade Protocol, and the process of state sector reform, will contribute to the improvement of public institutions involved in the standardization process.

Aligning Goals with the Southern African Development Community (SADC). Mozambique has a final draft quality policy (under consideration for approval) and a five-year strategic plan, which will be implemented when funding is identified from public budgets. The plan is intended to align with the SADC Trade Protocol goals, which emphasize the need for harmonization of standards and technical regulations as one of the ways to facilitate trade in the region. The need to properly manage programs related to quality, in general, and to standardization, in particular, has led the Ministries in charge of Industry and Trade in the region to adopt a Memorandum of Understanding on Standardization, Quality Assurance, Accreditation and Metrology (SQAM). Participation in regional and international standards-setting organizations is, however, limited to officials from various government organizations. Language barriers, inadequate financial and technical capacities, and a lack of awareness regarding SQAM issues are among the constraints that restrict effective participation in both regional and global standards-related activities.

Finally, the study highlights priority action items which require urgent attention. These include: (1) the development of an appropriate regulatory system including one for food safety protection; (2) effective control mechanisms for import and export goods; (3) development of an appropriate standards-setting system including facilities for training, metrology, accreditation, testing and certification; (4) strengthening of the country's participation on regional and international standards-setting bodies; and (5) support of the development of selected sectors in order to improve exports. Proposed projects to deliver these action points are highlighted in the concluding section of the case study.

3. Nigeria

The private sector in Nigeria is faced with crippling constraints such as high cost of production arising from devaluation of the local currency, high interest rates, increasing energy costs, inadequate infrastructure such as telecommunication, and transportation and domestic policy barriers. These factors are directly related to high costs of production and the failure of private enterprises. Even if these factors are removed, producing to meet the required international standards remains a challenge. Undoubtedly, if non-standard related constraints are removed, this will lower the cost of standards compliance. Yet, meeting quality standards still remains a problem to be solved if Nigerian firms are to derive full benefits from the market opportunities created through the WTO, AGOA, bilateral agreements, and regional market initiatives.

As in the Mozambique study, the chapter on Nigeria examines the awareness and impact of international standards and technical regulations on Nigeria's trade. It also assesses the current status of its laws, regulations, capacities and programs relating to standards and technical regulations. Additionally, the level of participation in international standards-setting processes is identified, and areas needing priority attention at the national level are listed. The chapter provides recommendations on key steps to be taken by government, private organizations, and relevant international development agencies to alleviate negative impacts and strengthen positive influences.

Unlike Mozambique and the other countries reviewed in this volume, the Nigerian economy is predominantly dependent on crude oil exports. Diversification of exports is a major challenge for Nigeria, and agricultural exports and output has declined. The dissolution of Commodity Boards, expected to stimulate the growth and diversity of non-oil exports by the private sector, has had a negative effect on the quality of agricultural products because the quality control functions of the commodity boards were not promptly reinstated.

Nigeria has skilled laborers, however, it lacks the resources and vintage infrastructure to conduct scientific research and properly harness inputs into standard development. For example, apart from the fact that standardization equipment is obsolete, modern communication equipment is lacking, including computers, which directly impacts Nigeria's ability to benefit from standards and related information information technology systems can provide.

In Nigeria, though local legislation relating to standards and technical regulations predate the WTO SPS Agreement, enforcement is weak, especially since the elimination of the Commodity Boards system in Nigeria. This has led to the rejection of Nigerian products in importing countries. The evidence shows that many of these rejections were due to the fact that commodities were not certified and were not subject to pre-shipment inspection. Through its standards regulatory agencies, SON, NAFDAC, and PQS, Nigeria has been involved in standardization; however, serious constraints are evident. These include; inadequate equipment and skilled technicians, lack of capacity to conduct risk assessment, and a limited laboratories accreditation program. These constraints suggest priority areas for technical assistance. Most programs in technical assistance since 1995 have been supported by multilateral institutions such as the UNDP, UNICEF, UNIDO, IAEA, and FAO, among others.

In Nigeria, the level of awareness by local firms and farmers with international standards is mixed. One reason for this is inadequate funding that limits outreach and communication activities of public and private sector groups. Public agencies have developed strategies to improve the dissemination of information including organizing workshops on food safety and quality focusing on hygienic practices, HACCP, and GMP; use of technical/news publications, informative press releases from the press and electronic media, advertisements, interviews, talk shows, consultative meetings with

stakeholders, corporate briefs, paid advertisements, and interviews. Other recent programs have focused on the issuing of communiqués, distribution of information and handbills, and attendance at commodity shows. Nonetheless, public awareness of quality and related standards is still very low.

The Nigerian study advances the following priority actions: need for a 'Standards Campaign' in the six geopolitical zones of Nigeria to create and sustain awareness among consumers and producers especially small scale producers; need to strengthen the National Codex Committee including its Secretariat to be able to modernize and integrate properly into international standardization processes; equipment should be upgraded through procurement of new technology in conformity with assessment and risk analysis; staff knowledge requires upgrading, especially with regard to demonstrating equivalence of standards through regular scientific training of laboratory staff; and cooperation among regional (ECOWAS) members for attending international standards-setting meetings should be engendered; harmonization of standards through the ISO, ARSO, etc., should continue and be intensified by ensuring regular attendance of meetings; budgetary provisions from the Nigerian government to standards institutions should be improved; bilateral technical assistance needs to be introduced and sustained in line with the requirements of the relevant articles of the SPS and TBT Agreements; formation of well-equipped private laboratories need to be facilitated by providing the enabling environment through relevant laws; and information and telecommunications facilities should be modernized to enhance good management of the standardization process. Some project ideas to facilitate the implementation of these recommendations were also identified.

4. South Africa

During the 1990's, South Africa stabilized its macro-economic environment thereby laying the foundations for more rapid and sustainable growth. Trade liberalization played an indispensable part in this process and the economy is increasingly being drawn into the global economy while the overall economic growth rate is becoming even more dependant on export growth than ever before. The composition of the export basket changed substantially away from primary exports to processed and manufactured merchandise. While some progress was made to penetrate "new" (geographic) markets, the traditional markets of the developed countries remain particularly important. Ties with these markets are believed to have become even stronger as the result of the SA-EU TDCA and the AGOA of the US. Deeper penetration into the more sophisticated domains of international trade, as suggested by these developments, increasingly requires South African producers to comply with applicable international standards to reap the benefits inherent in standards compliance.

It remains important in South Africa to build on existing standards and compliance infrastructure, especially with regard to regulatory standards. Fragmentation in a different sense, of the functions of standards-setting, compliance and dispute settlement, in the case of South Africa remains to be addressed. Furthermore, apart from regulatory requirements, standards that are being implemented in the procurement of merchandise by large developed country importers in the retail sector can, in fact, become barriers to trade.

While the SQAM initiative in South Africa appears promising, problems are evident at several levels (See the full chapter in this volume for more complete details). These are briefly: There are idiosyncrasies in the budgeting system. While the NML and SANAS submit their budgets to the Ministry of Trade and Industry for approval, the SABS is allocated its core funding through Parliament's Science Vote for the Science Councils. This means that the SABS is forced to "compete" with research organizations for funding (which the SABS is not). The notification link to the WTO via the SABS works well. However, there is no effective mechanism of notifying South African industry of foreign technical regulations. This means that industry is often not informed of draft regulations in other countries. The process of standards harmonization within SADC has also been very slow. This is due, in part, to the fact that member states' delegates fail to participate in technical committee meetings due to financial constraints.

The interaction between government departments in standards matters is limited. There are, for example, no regular meetings between government officials to discuss issues of common interest in standards and technical regulations. The main obstacles to participating in the process of standards-setting

are timely notification, capacity in dealing with standards-setting, language barriers, length of protocols and poor commercial understanding of those charged with negotiating on behalf of industry. The agencies that serve as national contact points for CODEX and IPPC have performed well, however, consultations with other departments needs to be strengthened.

Although the cost of compliance to standards, based on an initial review of results of the World Bank Technical Barriers to Trade Survey, appears not to be a primary obstacle to firms, problems are apparent in the following areas: (a) non-transparent international conformity assessment requirements that lead to lengthy intervals before information is received; (b) the foreign cost component for SMEs; and (c) the need to upgrade facilities, e.g., in plant equipment, hampers the ability of SMEs to participate in serving international markets.

The study shows that the South African government does provide significant assistance to SMEs in standards, quality assurance, accreditation and metrology. Most respondents interviewed in South Africa agreed that conformity assessment is important to export success and that SMEs had benefited from ISO 9000 certification, not only from a business point of view but also from a management point of view.

5. Uganda

Uganda has implemented a range of trade policy reforms since 1987. These reforms have aimed to reduce or eliminate policy biases against exports, while others have included direct export promotion measures. The significance of policy-induced barriers to trade has been substantially reduced. The foreign exchange market has been liberalized while domestic and external marketing of monopolies have been abolished. Producer and consumer prices have been deregulated. Tariff rates have either been reduced or rationalized and some non-tariff trade restrictions (e.g., quotas, import ban, etc.) have been converted into tariff equivalents, and taxes on exports have been abolished.

These policy initiatives have provided incentives, in the form of increased producer prices and prompt payment, to farmers resulting into increased growth and diversity of Ugandan exports. For example, the elimination of the monopoly by the Uganda Produce Marketing Board (PMB) has stimulated the growth and diversity of horticultural exports by the private sector. The share of non-traditional exports in total exports rose from about 14% in 1990 to just less than 40% in 2001. However, the diversity of Ugandan exports in terms of market destination is still lacking as the country's exports destined the European Union alone (about 69% in 1999) has been rising over the past decade.

Whereas policy-oriented constraints to external trade (e.g., tariffs, quotas, etc.) have reduced considerably over the past ten years, the role non-policy-induced constraints, including poor infrastructure, inefficient institutions and stringent standards, are increasing to significantly impact external trade. Much as the infrastructure and institutional constraints are important factors in limiting external trade, the Uganda analysis focused on the role and impact of standards and technical regulations on the competitiveness of Ugandan exports.

The responsibility of developing, monitoring and enforcing standards in Uganda falls under different ministries. Implementation of sanitary and phytosanitary requirements is the responsibility of the Crop Protection Department at Kawanda Agricultural Research Institute (KARI) and Fisheries Department under the MAAIF, while those in the manufacturing sector are implemented by the UNBS which falls under the Ministry of Tourism, Trade and Industry. Currently, these institutions have limited capacity (both personnel and infrastructure) to effect their mandate. For example, there are 28 government gazette custom entry/exit points that are supposed to have inspection units in Uganda, but presently SPIS, a department in the MAAIF based at KARI, serves only 11 points.

UNBS faces considerable constraints mainly regarding human capacity and infrastructure requirement to fulfill its obligations, (i.e., inspection, monitoring and enforcement of the compliance with the standards). It lacks equipment, sufficient technical staff and financial resources. UNBS requires about 130 technical staff but only 50 are in place currently. Four laboratories (located at Nakawa in Kampala) are still seeking international recognition. The constraints to accreditation are mainly both the lack of equipment to increase the capacity of these laboratories and the financial resources to commence the accreditation process. The overall estimated cost of restructuring the four laboratories for accreditation is US$12 million. In addition, UNBS lacks their

own permanent office space which is expected to cost US$11.4 million.

At the regional level, a lot of progress has been attained in standardization programs since the revival of EAC in 1998. The work on harmonization of laws regarding legal metrology has started. Training needs in standardization, quality assurance, metrology and testing have been identified but they needed funding. About 207 standards for goods and some codes of practice have been harmonized and notification of harmonized standards to WTO has been made. An idea of establishing the East African Accreditation Body for Quality Systems has been mooted and consumer organization, in the region are slated to participate in the development of regional standards.

The sector-specific diagnostics on the Uganda study focuses on the coffee, fish, honey, floriculture, horticulture, and light manufacturing sub-sectors. These sub-sectors are very important export earners and employment providers in Uganda. Furthermore, the fish, flower and horticultural exports have experienced considerable improvements over the past decade and these are sectors where quality requirements have shown to be more stringent. There have been numerous private initiatives to develop, monitor, and enforce standards under producers/exporters' associations and codes of practice. Producers/exporters' associations undertake training to their members in matters relating to quality management.

The study also points out areas where incentives/penalties for producers to comply with standards are non-existent or weak. Enforcement of standards is also found to be weak, though with variation with different stages in production and distribution chains and across sectors. Fast growing but relatively new sectors (e.g., horticulture, honey, etc.) are poorly organized. Uganda's horticultural sector comprises of small, scattered and poorly financed producers and exporters, which makes it difficult to organize and regularize their standards on quality assurance, pest and sanitary control at the farm- or firm-level. Capacity to carry out pest risk analysis is also very weak and this undermines export market opportunities created by trade preferential agreements like AGOA that require such tests and standards.

Private institutions (e.g., SGS, ACE, TQM and producers/exporters' associations with voluntary standards, as specified in various codes of practice) have also played a role in standards development, monitoring and enforcement. For example, the TQM, which started operations in 1988 and is affiliated with International Quality Media AS (a Norwegian Company), trains corporate bodies and other organizations in the Total Quality Management process as per the ISO certification standards. The cost of training and certification tends to be prohibitive to small business establishments. Certification costs are about US$3,000 and training costs average US$7,000, which is done every 3 years. There are projects providing financial assistance to organizations to train for compliance with ISO standards. For example the BUDS-SSE project under PSF has assisted about 40 organizations while the USAID funded SPEED project is presently assisting the fish industry and will move to other sectors and a European Union project EBAS based in Nairobi.

Overall, there is considerable appreciation (both by public and private producers) of the need to develop and comply with standards but major problems in the setting, monitoring and enforcement of standards remain and include the following:

(a) There is limited capacity (both in infrastructure and technical personnel) in most institutions responsible for the setting, monitoring and enforcing of standards in the country. There are some efforts underway to harmonize standards across the region, mainly in the East African community (EAC) and COMESA, which may reduce costs of enforcement of standards compliance.
(b) Compliance to standards requirements is largely being spearheaded by producers mainly for export markets. Therefore, compliance applies to only a small portion of production. This limits producers from taking advantage of standards development and compliance, which would not be so if standards requirements were uniformly applied to output irrespective of the market.
(c) There is limited awareness of the nature and existence of standards (at varying levels) among producers, particularly international standards.However, some sectors have attempted to develop and enforce standards in the form of codes of practice, which demonstrates the willingness to comply with standards and appreciation of the importance of standards by producers and exporters.

(d) The enforcement of standards is more at the export level, yet the standards or quality control should start right from the first point of production through the production chain and distribution system.

(e) Inspecting, monitoring, and certifying local firms with international recognition are limited. Acquiring these services from foreign firms are very expensive for most producers. There are considerable cost savings if local firms are accredited for certification to the level of other international standards-setting bodies. UNBS and other government agencies responsible for developing and enforcing standards are inadequately funded and understaffed; therefore they do not perform to the expectations.

(f) Incentives for compliance with standards are still weak in some sectors, such as coffee, but strong in other sectors, for example in fish and flowers where no sales can be made without meeting the standards.

The subsequent sections of this book present a more detailed case-by-case analysis of the issues outlined above. Chapter 1 presents the case study and action plan for Kenya in greater detail. Chapter 2 discusses challenges and opportunities for bridging the standards divide in Mozambique. Chapter 3 examines evidence of Nigeria's participation in international standards development, and prospects for non-oil exports. Chapter 4 reviews South Africa's role in setting international standards and opportunities for advancement. Chapter 5 provides a detailed study of Uganda's standards development system.

References

Amjadi, A. and Yeats, A. (1995), "Non-tariff Barriers Africa Faces: What Did the Uruguay Round Accomplish, and What Remains to be Done?", Policy Research Working Paper No. 1439, Washington DC: World Bank

Akyuz, Y. and Gore, C. (2001), "African Economic Development in a Comparative Perspective", Cambridge Journal of Economics, 25:265–288

Callaghy, T.M. (1995), "Africa and the World Political Economy: Still Caught Between A Rock and A Hard Place", Africa in World Politics, 2nd edition, eds. John W. Harbeson and Donald Rothchild (Boulder: Westview Press, 1995), pp. 41–68.

Coe, D.T. and Hoffmaister, A.W. (1999), "North-South Trade: Is Africa Unusual?", Journal of African Economies, 8 (2): 228–256.

Collier, P. and Gunning, J. W. (1999), "Why Has Africa Grown Slowly?", Journal of American Perspectives 13, No. 3 (Summer 1999): 3–22

Collier, P. and Gunning, J. W. (1999), "Explaining African Economic Performance", Journal of Economic Literature, Vol. XXXVII (March): 64–111

Deardoff and Stern (1998), "Measurement of Non-tariff Barriers", University of Michigan Press.

Fafchamps, M. (2001), "Networks, Communities and Markets in Sub-Saharan Africa: Implications for Firm Growth and Investment", Journal of African Economies, 10 (2): 109–142.

Finger, J.M. (2002), "The Doha Agenda and Development: A View from the Uruguay Round", Paper prepared for presentation at the annual meetings of the Asian Development Bank, Shanghai, China, May 11, 2002.

Fischer, R. and Serra, P., (2000), "Standards and Protection", Journal of International Economics, 52, p. 377–400, 2000, FONDECYT 1950513.

Fouroutan, F. (1998), "Comments on "Why is Trade Reform so Difficult in Africa?" by Dani Rodrik", Journal of African Economies, 7 (1), AERC Supplement May 1997: pp 146–149.

Fosu, A.K., et al (2001), "Business Environment and Investment in Africa: An Overview", Journal of African Economies, 10 (2): 1–11

G8 Africa Action Plan, (2002), see http://www.state.gov/e/eb/rls/othr/11515.htm

Global Economic Prospects and the Developing Countries (2003), Washington D.C., World Bank.

Global Poverty Report (June 2002), "Achieving the Millennium Development Goals in Africa: Progress, Prospects, and Policy Implications", Washington D.C., World Bank.

Guillaumont, P. et al, "How Instability Lowers African Growth", Journal of African Economies, 8 (1): 87–107.

Gyimah-Brempong, K. and Traynor, T.L. (1999), "Political Instability, Investment and Economic Growth in Sub-Saharan Africa", Journal of African Economies, 8 (1): 52–86.

Helleiner, G.K. (Eds) (2002), "Non-Traditional Export Promotion in Africa: Experience and Issues", United Nations University

Hertel, T.W., Masters, W.A, and Elbehri, A. (1998), "The Uruguay Round and Africa: a Global, General Equilibrium Analysis", Journal of African Economies, 7 (2): 208–234.

Hoeffler, A. (2002), "Openness, Investment and Growth", Journal of African Economies, 10 (4): 470–497.

Hoekman, B. et al (Eds), (2002), "Envisioning Alternative Futures: Reshaping Global Trade Architecture for Development" in Development, Trade, and the WTO—A Handbook. Washington DC: World Bank

Hoekman, B. et al (2002), "Reducing Agricultural Tariffs versus Domestic Support: What's More Important for Developing Countries?" Policy Research Working Paper No. 2918, Washington DC, World Bank

Ianchovichina, E. et al (2002), "Unrestricted Market Access for Sub-Saharan Africa: How Much Is It Worth and Who Pays?" Journal of African Economies, 10 (4): 410–432.

Ingo, M. and Winters, L.A. (Eds), (2001), "Agricultural Trade Liberalization in a New Trade Round: Perspectives of Developing Countries and Transition Economies", Discussion Paper No. 418, Washington DC: World Bank

Lall, S. and Wangwe, S. (1998), "Industrial Policy and Industrialization in Sub-Saharan Africa", Journal of African Economies, 7 (1): AERC Supplement May 1997: 70–107.

Maskus, K and Wilson, J.S. (2001), "A Review of Past Attempts and New Policy Context", in "Quantifying the Impact of Technical Barriers to Trade: Can it be Done?" by Maskus, K. and Wilson, J.S. (Eds), University of Michigan Press.

McCarthy, C. "Opportunities and Challenges Facing Africa in the Development of Key Export Sectors Under the WTO Agreement—A Focus on Mining, Manufacturing, and Services", WTO Framework Papers (CRC-3-5), Collaborative Research Project.

Michalopoulos, C. (1998), "Developing Countries' Participation in the World Trade Organization", Policy Research Working Paper No. 1906, Washington DC, World Bank

NEPAD Initiative on Market Access (2002), see http://www1.worldbank.org/wbiep/trade/Standards/files/agr-init-mkt-access.pdf

Ng, F. and Yeats, A. (1996), "Open Economies Work Better! Did Africa's Protectionist Policies Cause its Marginalization in World Trade?", Policy Research Working Paper No. 1636, Washington DC, World Bank

Ng, F. and Yeats, A. (2002), "What Can Africa Expect from Its Traditional Exports?" Africa Region Working Paper Series, No. 26. Washington DC, World Bank

North, D.C. (1990), "Institutions, Institutional Change and Economic Performance", Cambridge University Press

Oramah, B.O. and Abou-Lehaf, C. (1998), "Commodity Composition of African Trade and Intra-African Trade Potential", Journal of African Economies, 7 (2): 263–300

Oyejide, A. et al, (2001), "Quantifying the Trade Impact of Sanitary and Phytosanitary Standards: What is Known and Issues of Importance for Sub-Saharan Africa" in "Quantifying the Impact of Technical Barriers to Trade: Can it be Done?", Maskus, K and Wilson, J.S. (Eds), University of Michigan Press.

Oyejide, A. (1998), "Using Trade and Industrial Policies to Foster African Development: Some perspectives on Issues and Modalities", Journal of African Economies, 7 (1): (AERC Supplement May 1997), pp 34–42.

Oyejide, A. (1998), "Trade Policy and Regional Integration in the Development Context: Emerging Patterns Issues and Lessons for Sub-Saharan Africa", Journal of African Economies, 7 (1): (AERC Supplement May 1997), pp. 108–145.

Rodrik, D. (1998), "Why Is Trade Reform So Difficult In Africa", Journal of African Economies v7, n0 (Supplement 1 June 1998): 43–69

Sachs, J. and Warner, A (1995), "Economic Reform and the Process of Global Integration", Brookings Papers on Economic Activity v0, n1 (1995): 1–95

Sachs, J. and Warner, A. (1997), "Sources of Slow Growth in African Economies", Journal of African Economies v6, n3 (October 1997): 335–76

Sachs, J. and Warner, A. (1997), "Fundamental Sources of Long-run Growth", American Economic Review v87, n2 (May 1997): 184–88

Shafaeddin S.M, (1996), "Risks of Future Marginalization of SSA in International Trade" Geneva, Switzerland: United Nations Conference on Trade and Development.

Standards and Trade Database (2003), "TBT Survey Results on Kenya, Mozambique, Nigeria, South Africa, and Uganda", Washington DC, World Bank

Wang, Z. K. and Winters, L.A. (1998), "Africa's Role in Multilateral Trade Negotiations: Past and Future", Journal of African Economies, 7 (1): 1–33

Waniala, N. (2001), "Impact of SPS Measures on Uganda Fish Exports", Paper presented at the UNCTAD-sponsored Workshop on Standards and Trade, Kampala.

Wilson, J.S. (2001), "Advancing the WTO Agenda on Trade and Standards: A Developing Country Voice in the Debate", Draft Paper Prepared for the African Economic Research Consortium Conference on Trade, Geneva, March 8–9, 2001.

Wilson, J.S. et al (2001), "A Race to the Top? A Case Study of Food Safety Standards on African Exports", Policy Research Working Paper No. 2563, Washington DC: World Bank

Wilson, J.S. et al (May 2001), "Agriculture in the WTO: The Role of Product Attributes in Agricultural Negotiations", The International Agricultural Trade Research Consortium Commissioned Paper Number 17

Wilson, J.S. and Otsuki, T., (2001), "To Spray or Not to Spray: Pesticides, Banana Exports, and Food Safety", Policy Research Working Paper No. 2805, Washington DC: World Bank

Wilson, J.S. and Otsuki, T., (2001), "Global Trade and Food Safety: Winners and Losers in a Fragmented System", Policy Research Working Paper No. 2689, Washington DC: World Bank

Wilson, J.S. (2002), "Standards, Regulation, and Trade: WTO Rules and Developing Country Concerns", in Development, Trade, and the WTO—A Handbook, Bernard Hoekman, Aaditya Mattoo, and Philip English, eds. Washington DC: World Bank

Wohlmuth, K. et al (Eds), (2000/1), "Africa's Reintegration into the World Economy: Part A: Basic Issues", African Development Perspectives Year Book

Wohlmuth, K. et al (Eds), (2000/1), "Africa's Reintegration into the World Economy: Part B: Country Case Studies", African Development Perspectives Year Book

Wood, A. and Mayer, J. (2001), "African's Export Structure in a Comparative Perspective", Cambridge Journal of Economics 2001, 25: 369–394.

World Development Report (2002): "Building Institutions for Markets", Washington DC: World Bank

Yeats, A. (1994), "What are OECD Trade Preferences Worth to Sub-Saharan Africa?", Policy Research Working Paper No. 1254, Washington DC: World Bank

Yeats, A. et al (1996), "Did External Barriers Cause the Marginalization of Sub-Saharan Africa in World Trade?", Policy Research Working Paper No. 1586, Washington DC: World Bank

Yilmaz, A. and Gore, C. (2001), "Africa Economic Development in a Comparative Perspective", Cambridge Journal of Economics v25, n3 (May 2001): 265–288