

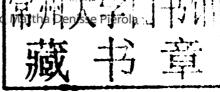
DIRECTIONS IN DEVELOPMENT
Trade

# Pathways to African Export Sustainability

Paul Brenton, Olivier Cadot, and Martha Denisse <u>Pierola</u>

Pathways to African Export Sustainability

Paul Brenton, Olivier Cadot, and Martha Dens.





 $\ensuremath{\mathbb{G}}$  2012 International Bank for Reconstruction and Development / The World Bank 1818 H Street NW

Washington DC 20433 Telephone: 202-473-1000 Internet: www.worldbank.org

Some rights reserved

#### 1 2 3 4 15 14 13 12

This work is a product of the staff of The World Bank with external contributions. Note that The World Bank does not necessarily own each component of the content included in the work. The World Bank therefore does not warrant that the use of the content contained in the work will not infringe on the rights of third parties. The risk of claims resulting from such infringement rests solely with you.

The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, 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.

Nothing herein shall constitute or be considered to be a limitation upon or waiver of the privileges and immunities of The World Bank, all of which are specifically reserved.

#### Rights and Permissions



This work is available under the Creative Commons Attribution 3.0 Unported license (CC BY 3.0) http://creativecommons.org/licenses/by/3.0. Under the Creative Commons Attribution license, you are free to copy, distribute, transmit, and adapt this work, including for commercial purposes, under the following conditions:

Attribution—Please cite the work as follows: Brenton, Paul, Olivier Cadot, and Martha Denisse Pierola. 2012. *Pathways to African Export Sustainability*. Washington, DC: World Bank. DOI: 10.1596/978-0-8213-9559-2. License: Creative Commons Attribution CC BY 3.0

Translations—If you create a translation of this work, please add the following disclaimer along with the attribution: This translation was not created by The World Bank and should not be considered an official World Bank translation. The World Bank shall not be liable for any content or error in this translation.

All queries on rights and licenses should be addressed to the Office of the Publisher, The World Bank, 1818 H Street NW, Washington, DC 20433, USA; fax: 202-522-2625; e-mail: pubrights@worldbank.org.

ISBN (paper): 978-0-8213-9559-2 ISBN (electronic): 978-0-8213-9560-8 DOI: 10.1596/978-0-8213-9559-2

Library of Congress Cataloging-in-Publication data has been requested.

# **Acknowledgments**

This report was written by Paul Brenton, Olivier Cadot, and Martha Denisse Pierola with assistance from the Bank-Netherlands Partnership Program (BNPP) Trust Fund 092945. The authors are grateful to the Netherlands government for providing the financial resources necessary to carry out background research, including an original survey of African exporters and the collection of data from customs administrations in a number of African countries. We thank the customs authorities in Ghana (Ghana Revenue Authority), Malawi (Malawi Revenue Authority), Mali (Direction Générale des Douanes), Senegal (Direction Générale des Douanes), and Tanzania (Tanzania Revenue Authority) for providing the team with the exporter-level transaction data required to conduct research. We also thank Francis Aidoo, William Baah-Boateng, Caesar Cheelo, Sidiki Guindo, Anthony Mveyange, and Nelson Nsiku for their very valuable efforts supporting the team during the data collection and survey implementation stage of this project. The report is based on background papers by Felix Arndt, Gaelle Balineau, Céline Carrère, Jaime de Melo, Laure Dutoit, Leonardo Iacovone, Julien Gourdon, Mélise Jaud, Marie-Agnès Jouanjean, Madina Kukenova, Jean-Christophe Maur, Marcelo Olarreaga, Caglar Ozden, Ferdinand Rauch, Yuliya Shakurova, and Ben Shepherd. We are particularly grateful for the comments and suggestions of the peer reviewers of this report: Elisa Gamberoni and Javier Suarez.

#### **About the Authors**

Paul Brenton is the Trade Practice Leader in the Poverty Reduction and Economic Management Department of the Africa Region of the World Bank. He co-edited the recent World Bank volume on *De-Fragmenting Africa: Deepening Regional Integration in Goods and Services*. Previously he served in the Trade Department of the Bank, where he worked for several years on issues related to trade reform with a focus on regional integration. Dr. Brenton joined the Bank in 2002, having been Senior Research Fellow and Head of the Trade Policy Unit at the Centre for European Policy Studies in Brussels. Before that he was a lecturer in Economics at the University of Birmingham in the United Kingdom. He has a Ph.D. in Economics from the University of East Anglia.

Olivier Cadot is a Professor of International Economics and Director of the Institute of Applied Economics at the University of Lausanne, Switzerland. Prior to taking up his position at Lausanne, he was Associate Professor of Economics at INSEAD. He has held visiting appointments at University of California, Los Angeles (UCLA) and McGill University, New York University, Université d'Auvergne, Koç University, the Paris School of Economics, and the Institut d'Etudes Politiques de Paris. He was a Senior Economist in the World Bank's Trade Department between

2009 and 2011, and has advised the French government, the Swiss federal government, and the European Commission on trade policy matters. He also worked for the Organisation for Economic Co-operation and Development (OECD) and the International Monetary Fund. He was elected best teacher at HEC (Faculty of Business and Economics) Lausanne and was nominated three times for the Outstanding Teacher Award at INSEAD. He has contributed regularly to international executive programs. He is a Research Fellow of the Center for Economic Policy Research in London, a Senior Fellow of the FERDI (Foundation for International Development Study and Research), and Associate Scholar at CEPREMAP (Center for Economic Research and its Applications). He serves on the editorial board of the Revue d'Economie du Développement and on the scientific advisory board of the Fondation Jean Monnet. He has published numerous scholarly papers on international trade and economic development. Professor Cadot holds a Ph.D. in Economics from Princeton University and a Master's in Economic History from McGill University.

Martha Denisse Pierola is an Economist in the Trade and International Integration Unit of the Development Research Group of the World Bank. She has published several papers on export growth and exporter dynamics and is currently managing the development of the first-ever global database on exporter growth and dynamics, based on firm-level export data. Previously, she worked on issues related to regionalism, trade costs, and trade and productivity. Before joining the World Bank in 2005, she worked as an economist for the Peruvian government (INDECOPI) and also consulted for the private sector and other international organizations. She has a Ph.D. in Economics from the Graduate Institute of International Studies in Geneva, Switzerland, and a Master's in International Law and Economics from the World Trade Institute in Bern, Switzerland.

## **Abbreviations**

**ACP** African, Caribbean, and Pacific

ASEAN Association of Southeast Asian Nations ASYCUDA/SYDONIA

Automated System for Customs Data/

Système Douanier Automatisé

CACM Central American Common Market CMT cut, make, and trim

COMESA Common Market for Eastern and Southern

Africa

COMTRADE United Nations Commodity Trade Statistics

Database

CPC crop-protection chemical DID difference-in-difference **ECA** Europe and Central Asia

**ECOWAS** Economic Community of West African

States

**EMIC** exporter country migrants in importing

EPA Environmental Protection Agency

EU European Union

EU-REP Euro-Retailer Produce Working Group FDA Food and Drug Administration FD&C Food, Drug and Cosmetics Act FFV fresh fruit and vegetables

FSIS Food Safety and Inspection Service

GAP good agricultural practices

HACCP hazard analysis and critical control points

HS Harmonized System

ICM integrated crop management IPM integrated pest management

IT import tolerance

KM Kaplan-Meier survivor functions
LAC Latin America and the Caribbean
LPI Logistics Performance Index
MENA Middle East and North Africa

MERCOSUR Mercado Común del Sur (Southern Cone

Common Market)

MRL Maximum Residue Levels

NAFTA North American Free Trade Agreement

OECD Organisation for Economic Co-operation and

Development

PIP Pesticide Initiative Program
PPP Purchasing Power Parity

RASFF Rapid Alert System for Food and Feed RFII Revealed Factor Intensity Indices

ROO rules of origin

RPED Regional Program on Enterprise Development

SACU Southern African Customs Union

SADC Southern African Development Community
SITC Standard International Trade Classification

SPS sanitary and phytosanitary measures

SSA Sub-Saharan Africa
TFP total factor productivity
UAE United Arab Emirates

UEMOA Union Economique et Monétaire Ouest Africaine

(West African Economic and Monetary Union)

UN United Nations

UNCTAD United Nations Conference on Trade and

Development

U.S. United States

## **Contents**

Acknowledgments About the Authors Abbreviations		
	Introduction	1
Chapter 1	Export Survival: What We Know about Africa	7
	Export Survival: A First Pass at the Evidence	8
	Do African Exports Really Survive Less Long?	10
	Understanding Entry, Exit, and Survival Decisions	22
	Annex 1A: The Basic Analytics of Survival	29
	Annex 1B: The Basic Toolkit of Empirical	
	Survival Analysis	33
	Notes	36
	References	36
Chapter 2	Countries, Institutions, and Policies	39
-	Comparative Advantage	40
	Trade Costs and the Business Environment	48
	Standards and Their Enforcement	60

	Annex 2A: Survey of African Exporters on Export Survival Notes References	66 69 71
Chapt	Exports, Firms, and Survival Learning and Synergies Networks: Migrants and Diasporas	77 77 81 88
	Notes References	98 99
Chapt	er 4 Policy Implications	105
	Thinking Strategically: Export-Expansion Paths Trade Preferences: What Role Should They Play? A Role for Support Services and Technical	106 108
	Assistance	110
	Notes	120
	References	121
Boxes	5	
2.1	Examples of Non-Tariff Barriers and Their Costs in	
	Southern Africa	49
2.2	A Malian Mango's "Soldier's Run"	63
4.1	The Agri-Food Product Risk Index	112
Figur	es	
1.1	Average Export Survival by Origin Country, 1979–2010	9
1.2	Average Export Survival by Destination, 1979–2010	10
1.3	Sub-Saharan Africa's Exports Relative to Comparator Group, 1960–2010	11
1.4	Average Export Survival by Exporter (Origin) Income, 1979–2010	13
1.5	Average Spell Survival by Importer (Destination) Income, 1979–2010	14
1.6	Kaplan-Meier Survival Function for Developing- Country Originating Products in OECD Markets	15
1.7	Kaplan-Meier Survival Function for Sub-Saharan Africa-Originating Products in OECD Markets	15

1.8	Average Spell Survival and Exporter-Country Income, 1979–2010	1.0
1.9	Export Survival and Income by Sector, 1979–2010	16
1.10	Sunk Costs and the Frequency of Exits	17
1.10	Number of New Export Lines (HS 6) against	23
1.11	Income Levels	2.5
1.12	Export Growth Decomposed, 1990–2005	25
1.13	Entry and First-Year Entrants' Survival Rates at the	26
1.13	Firm Level	28
2.1	Average Spell Survival and Comparative Disadvantage	42
2.2	Traveling through Diversification Cones	44
2.3	Evolution of Sectoral Shares with Income Levels	45
2.4	Constraints to Survival	54
2.5	First-Year Survival Rates and Business Environment	5
	Measures in the Origin Country	56
2.6	First-Year Survival Rates and Financial Development	58
3.1	Source of Client Contact, 2009	87
3.2	Importance of Barriers to Export: Regular Exporters	
	(Number of Responses), 2009	91
3.3	Occupational Changes of Internal and International	
	Migrants: Burkina Faso, 2009	94
4.1	Effect of Prior, Non-OECD Experience on First-Year	
	Survival Rates by Region of Origin	107
Tables		
1.1	Cox Regression Results: Estimation of Export Spell	
	Hazard Rates, All Developing Countries	19
2.1	Survival Versus Business Environment Measures in African	
	Countries: Correlations	59
2A.1	Survey of African Exporters on Export Survival:	
	Distribution of Exporters by Exporter Type	66
3.1	Origin and Destination of Emigrant Stocks by Region	92
3.2	Origin and Destination of Emigrant Stocks by African	
	Region, Percent of Total Emigration	93
3.3	Export-Spell Hazard Rate Estimates: Cox Regressions	96
4.1	Cox Regression Results: The PIP Effect on Survival of	
	Senegalese FFV Exports to the EU Market	116

## Introduction

African exporters suffer from low survival in international markets. This means that they fail more often than other exporters, undermining their reputation with foreign buyers and condemning themselves to incurring again and again the setup costs involved in starting new relationships. This high churning is a source of waste, uncertainty, and discouragement. Can something be done about it?

Is this really the case? The paragraph above had the pessimistic overtone of most of the literature on African economic performance, whether on export markets or otherwise. But does this pessimism withstand scrutiny? This report will show that the answer is "no." When survival performance is controlled for by observable country characteristics such as—among other things—the level of income, Africa is no outlier. African exports have short life expectancies, but not any shorter than comparable countries. Beyond income levels, short export survival is largely explained by the difficult business environment in which African exporters operate. Once measures of this environment are taken into account, African countries are by no means "below the regression line" in terms of export survival.

There is more to dispel the dismal tone of our opening paragraph. African exporters, like those in other low-income countries, show extraordinarily vigorous entrepreneurship. Entry rates into new products and new markets are high in spite of the formidable hurdles created by

poor infrastructure and landlockedness for some or limited access to major sea routes for others. African exporters experiment a lot, and frequent failure is a price to pay for a chance to succeed. In fact, it is the basic mechanism through which populations improve, through what biologists call "Darwinism" and economists call "creative destruction." In that sense, low survival is good news.

Why should we worry, then? We should be concerned about low export survival for the same reason we are concerned with high infant mortality. Every failure has a cost, and the very high failure rates that we observe suggest, beyond experimentation, that the environment must be so rough that it is bound to entail a large proportion of "accidental" deaths. It is those deaths that we want to reduce through better policies.

Lessons from empirical evidence gathered in background papers to this report and from a recent survey of African exporters carried out by the World Bank, also as background to this report, suggest that the environment in which African exporters operate can be improved through traditional prescriptions to improve trade facilitation, the legal environment of business, better access to credit, and also through more proactive interventions targeting the firms themselves, provided that those interventions are well designed.

This report provides tentative leads toward such policy prescriptions, based on an overview of the empirical evidence. Chapter 1 sets the stage by putting Africa's export-survival performance into perspective and proposing a framework that will guide the interpretation of empirical evidence throughout the report. Chapter 2 covers country-level determinants of export sustainability at origin and destination, including the exporting country's business environment. Chapter 3 explores some of the firm-level evidence on what drives export sustainability, including uncertainty, incomplete contracts, learning, and networks. Finally, chapter 4 offers tentative policy implications.

The main conclusions from this overview of the causes of Africa's low export sustainability should be taken with caution both because of the complexity of the issue and because of the very fragmentary evidence on which the overview is based. We should be more cautious in drawing policy implications, as hasty policy prescriptions are the most common trap into which reports of this kind can fall. A first, solid conclusion is that we need substantial additional work on the nature and causes of low export survival rates in developing countries to determine the path to high export sustainability. We close the report with some suggestions of where new work is most needed.

Yet, before that, we do propose a number of additional tentative remarks linking this work with recent analysis on barriers to trade in Africa presented in the World Bank report *De-Fragmenting Africa: Deepening Regional Trade Integration in Goods and Services* (http://go. worldbank.org/MKK5U1Y2D0). First, Africa suffers from a low-survival syndrome because its business environment is a difficult one. Trade costs are high, directly—because of high freight rates and long inland routes; and indirectly—because of burdensome customs and administrative procedures and substantial non-tariff barriers. Productive capacities are constrained by many factors, prominent among which is the lack of access to critical services, including credit from financial services providers, which prevents African exporters from responding in time to escalating buyer demands.

As a result of this difficult environment, Africa may find it difficult to nurture the kind of midsize exporters that have proved, in other environments, to be the most adaptable and resilient to changing competitive situations. Because of the continent's small and fragmented domestic markets and low levels of intra-regional trade, African exporters have little opportunity to gain local experience before being approached by larger buyers, often resulting in mismatch and premature failure.

However, there are grounds to be optimistic. Intra-regional trade is growing but remains a small fraction of its potential. Although tariff barriers have been reduced or removed in many regional communities in Africa, non-tariff barriers remain a major constraint to trade in goods while limits on market access and restrictive regulatory regimes limit trade in services. While still a major issue, the infrastructure deficit in Africa is coming down—but here it is important to coordinate investments in infrastructure with policy reforms that deliver competitive services. In addition, as African diasporas abroad gain in economic status, they are posited to help the continent's exporters reach out to new markets with which they have little familiarity, like other—especially Asian—diasporas have long done for their home countries.

Governments can help secure and accelerate these positive trends. They can help, first, by vigorously pursuing trade-facilitation agendas and by working to improve the business environment in which exporters operate. They can also work to improve the performance of export-promotion agencies with a view toward better sustainability of results and more strategic assistance on optimal long-term export-expansion paths.

Efforts to promote the deeper integration of African markets through more effective regional agreements will help African exporters accumulate

experience on markets with which they can rapidly gain familiarity and where consumers have similar preferences. These efforts should focus on providing transparent, predictable, and stable trade policy environments and avoid abrupt changes in non-tariff barriers as a response to temporary market disruptions or to lobbying demands. They should also target the simplification and relaxation of rules of origin so as to foster the emergence of regional supply chains populated by firms of similar size and outlook, as this has been shown in other contexts to be a factor in longlasting relationships.

Finally, African countries and international organizations should engage in dialogue with industrial countries to reduce the current degree of discretionarity in the application of sanitary and phytosanitary standards for agri-food products, as is current practice in some Organisation for Economic Co-operation and Development countries, based on reputation as much as evidence. This tends to penalize new exporters with no established records, creating uncertainty through a constant risk of rejection.

Since this is an early report in the analysis of export survival in Africa, there is clearly much scope and need for further research. The following are a number of areas that stand out for additional analysis:

- There is a need to understand the role of export intermediaries. For a number of products, especially raw agricultural products, exports are not undertaken by firms that produce products but rather by export agents that sell overseas the output of a large number of smallholder producers. These intermediaries may be making strategic decisions on where to sell such produce according to prices in particular markets. As such, they may shift exports from one market to another in a way that suggests regular entry and exit from particular markets in the customs statistics.
- The analysis thus far has used official customs statistics and information from firms that are exporting officially. A vast number of traders in Africa operate in the informal sector, in large part because of the hostile business environment and the high costs of formally crossing borders. Part of the pathway to export sustainability will be to facilitate the movement of exporters from the informal to the formal sector, an effort that will have to include addressing the key factors that may undermine their survival as formal exporters. Identifying success stories of exporters that have successfully migrated from the informal to the formal arena can provide important information in this regard.

- The analysis here has focused entirely on trade in goods. An increasingly important feature of the global economy and regional markets in Africa is trade in services. Trade in services holds enormous potential for regional integration in Africa, especially for landlocked countries whose opportunities to trade in manufactures are limited relative to large coastal countries. It would be very useful to look at the survival rates of services flows across borders and their determinants and to see if and how they differ significantly from the situation regarding the survival of goods exports flows.
- More studies are needed that carefully assess the impact of trade promotion and other efforts to encourage exporters, and to include in the analysis not only the impact on export volumes but also on the survival rates of the underlying export firms. Of particular use would be studies looking at impacts of programs that have supported greater participation in regional trade on the subsequent entry of beneficiary firms into global markets.