



MOZAMBIQUE'S COMPETITIVENESS AND THE NATURAL RESOURCE BOOM

ANALYSIS AND PERSPECTIVES



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NOTE FROM HIS EXCELLENCY THE AMBASSADOR OF THE UNITED STATES OF AMERICA TO THE REPUBLIC OF MOZAMBIQUE

Mozambique is entering an exciting phase in its development. The country is undergoing a transformative economic boom as a result of the exploration of its many natural resources. This offers an unprecedented opportunity for significant economic development and improvement in the lives of Mozambique's citizens.

As the documents collected in this publication show, there are significant challenges ahead to ensure that the country's key sectors - agriculture, tourism and manufacturing - become competitive. This competitiveness will be critical to ensuring that the resource boom truly delivers broad-based socio-economic development and employment opportunities that transform the lives of all Mozambicans.

Economic development offers a pathway out of poverty, and quality, dignified employment, specifically in agriculture, tourism and manufacturing. The studies collected here show that access to skilled labor is currently a major challenge and one which is likely to grow as the resource boom develops. However, with careful investment in education and skills creation now, Mozambique can overcome this challenge and position itself so that in the future its young people have an opportunity to improve the lives of their own families and further contribute to Mozambique's development.

The reports highlight a number of challenges related to the business environment and its effects on agriculture, tourism and manufacturing. Few of these challenges are unique to one sector. Failure to overcome these challenges will limit trade and investment opportunities, thereby curbing development. Each of the constraints discussed in this publication acts to limit the growth and development of sectors which offer the best opportunities for employment, growth of local Small and Medium Enterprises and overall economic development. The constraints are well-known. The challenge facing Mozambique now is how to overcome them in order to position itself best to take the greatest advantage of the resource boom in order to benefit the maximum number of people.

The United States Government stands ready to assist Mozambique in facing these challenges at this unique turning point in its history. We take a long-term view of relationships with our partners. Our U.S. Agency for International Development (USAID) has been a partner with Mozambique in improving the business environment since 1994. The documents gathered here are the fruits of this positive and productive collaboration.

Policy decisions taken now will shape Mozambique's future. We are delighted to support Mozambique's current and future leaders in government and the private sector, in shaping responses to the tremendous opportunities of the coming decades.

Douglas M. Griffiths

Ambassador of the United States of America

Maputo, 1st December, 2014

NOTE FROM THE PRESIDENT OF THE CTA MANAGEMENT BOARD

Mozambique is at a turning point in its history. The discovery of vast reserves of mineral wealth offer major opportunities for business and for the country as a whole. At CTA we have been extensively discussing the opportunities and challenges which this resource “boom” can offer to business. This publication is a result of some of the research we have undertaken.

It is clear that Mozambique’s natural resources offer us many opportunities. However as the documents gathered here show, there are also some significant challenges particularly to our core economic sectors, agriculture, manufacturing and tourism. Indeed it is not only the resource boom and the potential effects of Dutch disease which threaten these sectors, but also the current operating environment.

The challenges affecting business in Mozambique are many and well-known. They range from lack of infrastructure, access to credit, access to skilled labor through access to land to policy and regulatory issues and the quality of bureaucracy. CTA has been working to improve the business environment since our creation over 18 years ago. We believe that constructive public-private dialogue is the best way to ensure that our economy is structured in such a way as to offer the best possible benefits to business of all sizes. The growth and development of business is, in our view, the best way to ensure quality employment and socio-economic growth for everyone in the country.

The reports in this publication highlight a series of critical issues which, if not addressed, will not only affect business in the future but affect our competitiveness now. We look forward to the opportunity to share and discuss the results of these several studies and where possible resolve the critical issues raised by them. Additionally, we have to move forward with meaningful reforms so that Mozambique’s private sector can be the best that it can be now and in the future. By private sector we mean, large companies and SME’s. The opportunities arising from the resource boom should be available and affordable for all kind of local firms

We take this opportunity to thank USAID’s SPEED Program for their contribution to our work over the past four years, and hope that you will find this publication, which is one of many results of our work together, useful.

Rogério Manuel

President of the CTA Management Board

Maputo, 1st December, 2014

PREFACE

Competitiveness is the single biggest challenge facing Mozambican businesses today.

Looking forward a couple of decades, ongoing discoveries of natural resources offer the country an opportunity to engineer an economic transformation which will benefit not only business but society as a whole. However natural resource discoveries of the magnitude of those discovered in Mozambique not only confer benefits but also bring risks.

USAID/SPEED began addressing the potential impacts of a resource boom on the economy as early as 2011, long before other stakeholders started paying attention. We began with research on the possible impacts of changes to the exchange rate and the spectre of “Dutch disease”. Since then, with our partners from CTA, we have explored a variety of ways in which the resource boom may affect the private sector. This publication includes most of the work we carried out over the past four years. All of the reports included here, along with many more reports, presentations, short notes, and opinion blogs are available on www.speed-program.com.

In the course of our work, we have explored potential macro-economic effects of the resource boom and discussed ways to manage these. Our early work predicted that Mozambique’s GDP could triple or even quintuple over the next 10-15 years. Subsequent work by Standard Bank forecasted that the economy could grow eightfold by 2035. Those kinds of inflows are bound to have a profound impact on the country’s economy.

We are particularly concerned about “Dutch disease”, a term that originated in a 1977 article that appeared in *The Economist*. The article discussed the macroeconomic effect of a natural gas boom that took place in the Netherlands. As natural gas revenues grew, the value of the country’s currency strengthened by 16.4 percent in six years. On the other hand, domestic industrial production stagnated, the share of employment in manufacturing fell 16 percent in seven years, and unemployment rose. As defined by *The Economist*, “this contrast – between external health and internal ailments – is the symptom of ‘the Dutch disease’”. The question is whether and how Mozambique can avoid the trap of Dutch disease when so many other countries in Africa and beyond have fallen ill.

We have looked at the potential impacts of the natural resource boom on the competitiveness of Mozambique’s key economic sectors, agriculture, manufacturing and tourism, as well as the overall potential effects on employment. As the reports contained here show, even before the effects of the resource boom truly take hold, these sectors are struggling to become or remain competitive.

To better understand the root causes of this competitiveness problem, we include here an evaluation of the evolution of the business environment over the past 18 years. This evaluation indicates that a number of the critical factors affecting business competitiveness are not new but have been tabled in consecutive years by the private sector within the existing public-private dialogue framework. The issues affecting competitiveness are well-known. The need to address them becomes ever more urgent in the light of the resource boom, which will place further pressure on the key economic sectors which offer the best opportunities for broad-based structural transformation, employment creation and socio-economic development.



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The resource boom also offers opportunities for Mozambican businesses. To explore ways in which the private sector can potentially benefit from the resource boom we have included here work on local content and ways in which a well-structured local content policy could support the growth of business over time.

The contents of this publication do not always make for comfortable reading, and focus primarily on the challenges facing the country in general and those involved in promoting business. However, the story is in fact one of opportunity. The challenges highlighted here are not insurmountable, indeed many could be resolved relatively easily.

It has been my pleasure, and that of my team, to work with a wide variety of stakeholders in developing the contents of this publication. We hope that it will contribute to an informed and lively debate about how Mozambique can best seize the opportunities afforded it by the resource boom. The USAID/SPEED team looks forward to continuing to work on the issues discussed here, and others, over the next twelve months and we welcome your comments, which can be directed to us through our web site or social media pages.

Brigit Helms

Director of USAID SPEED

Maputo, 1st December, 2014

ACRONYMS

A2F	Acesso ao Financiamento
AAAJC	Associação de Apoio e Assistência Jurídica às Comunidades
ACET	African Center for Economic Transformation
ACIS	Associação de Comércio e Indústria – Commercial and Industrial Association
AfDB	African Development Bank
AHLA	American Hotel and Lodging Association
AHSM	Associação dos Hotéis do Sul de Moçambique
AHTI	Associação Hotel Turismo de Inhambane
AIM	Agência de Informação de Moçambique
AMA	Associação do Meio Ambiente
ANGOL	Angolan subsidiary of Portugal's SACOR
APDF	Instrumento para o Desenvolvimento de Projectos em África
AR	Assembleia da República – Parliament
ARV	Anti-retroviral
ASA	Associação para Sanidade Ambiental
ASINHOS	Associação Indust.Hoteleira e similar de Gaza
AusAID	Australian Agency for International Development
BAU	Balcão de Atendimento Unico – Single Service Desk
BBC	British Broadcasting Corporation
BBEE	Broad-based black economic empowerment
BC	Business concession
BCG	Bevan, Collier, and Gunning
BCI	Banco de Comércio e Indústria
BCI	Business Confidence Index - Índice de Ambiente de Negócios (IAN)
BEAM	Criar Competências de Engenharia em Moçambique
BEE	Business Environment Evolution
BEE	Emancipação Económica da População Negra
BEE	Black economic empowerment
BM	Banco de Moçambique (Bank of Mozambique)
BOM	Bank of Mozambique
BP	British Petroleum
CAADP	Comprehensive African Agriculture Development Program
CAC	Conselho Alargado de Consulta – Broad Consultation Meeting
CASP	Conferência Anual do Sector Privado – annual private sector conference
CBO	Community based organization
CDM	Cervejas de Moçambique
CDN	Northern Development Corridor
CDTUR	Associação de Hotelaria e Turismo de Cabo Delgado
CEN	Conselho Empresarial Nacional - National Business Council
CEP	Comissão Empresarial Provincial - Provincial Business Commission
CEPAGRI	Commercial Agriculture Promotion Center
CFM	Caminhos de Ferro de Moçambique
CIDA	Canadian International Development Agency
CIM	Companhia Industrial de Matola
CIP	Centro de Integridade Pública (Center for Public Integrity)
CLIN	Integrated Northern Logistics Corridor
CM	Conselho de Ministros – Council of Ministers
CMT	“Cut-make-trim” (clothing companies)
CNCS	Conselho Nacional de Combate ao HIV/SIDA
CONSILMO	National Confederation of Independent and Free Trade Unions of Mozambique
CONSILMO	Confederação Nacional dos Sindicatos Independentes e Livres de Moçambique

COre	Center for Entrepreneurial Orientation
CPI	Center for Investment Promotion
CPI	Centro de Promoção de Investimentos
CSO	Civil society organization
CSR	Corporate social responsibility
CSSDP	Copperbelt SME supplier development program
CSWs	Commercial sex workers
CTA	Confederação das Associações Económicas de Moçambique – Mozambique Confederation of Economic Associations
CTV	Centro Terra Viva
DAI	Development Alternatives, Inc.
DASP	Direcção de Apoio ao Sector Privado – Government Department for Private Sector Support
DCAT	Direcção de Coordenação e Apoio Técnico, Autoridade Tributária de
DD	Dutch Disease
DFID	Departamento para o Desenvolvimento Internacional, do Reino Unido
DINATUR	Direcção Nacional do Turismo
DNEAP	National Directorate of Studies and Policy Analysis (Ministry of Planning and Development)
DNEAP	Direcção Nacional de Estudos e Análise de Políticas (Ministério da Planificação e Desenvolvimento)
DNGC	Direcção Nacional de Geografia e Cadastro
DNM	Direcção Nacional de Minas
DNTF	Direcção Nacional de Terras e Florestas
DP Mines	Provincial Director of Energy, Natural Resources and Mines
DPA	Provincial Director of Agriculture
DUAT	Direito de Uso e Aproveitamento da Terra (Right to Use and Benefit from Land)
EDM	Electricidade de Moçambique
EFCC	Economic and Financial Crimes Commission
EIA	Environmental impact assessment
EIA	U.S. Energy Information Administration
EITI	Extractive Industries Transparency Initiative
EIU	Economist Intelligence Unit
EMAN	Estratégia de Melhoramento do Ambiente de Negócios – Business Environment Improvement Strategy
EMAN	Strategy for the Improvement of the Business Climate
ENDE	Estratégia Nacional de Desenvolvimento – National Development Strategy
ENH	National Hydrocarbon Company
EPC	Engineering, Production, and Construction (contractor)
EPC	Engenharia, Produção e Construção (empreiteiro)
EPCM	Sector de Engenharia, Aquisição, Construção e Gestão
ER	Exchange rate
ER	Taxa de Câmbio
ER	Nominal Exchange Rate
ERPT	Exchange rate pass-through
FAAC	Federal Account Allocation Committee
FAO	Food and Agriculture Organization of the United Nations
FDI	Investimento Directo Estrangeiro (IDE)
FDI	Foreign direct investment
FEMOTUR	Federação Moçambicana de Turismo e Hotelaria
FEP	Subnational Platform
FERMA	Federal Road Maintenance Agency
FIAS	Facility for Investment Climate Advisory Services
FIT	Free and independent traveler
FSDEA	Fundo Soberano de Angola
GAZEDA	Gabinete para as Zonas Económicas de Desenvolvimento Acelerado – Department for the Fast Developing Economic Areas

GC	Global Compact
GDP	Gross Domestic Product
GDP	Produto Interno Bruto
GIP	Grupo Intersectorial Provincial - Provincial Intersectoral Group
GIRBI	Gabinete Inter-ministerial para a Remoção de Barreiras ao Investimento - Interministerial Strategy Monitoring Group
GoB	Government of Botswana
GoM	Government of Mozambique
GOM	Government of Mozambique
GoN	Government of Nigeria
GoPNG	Government of Papua New Guinea
GTZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German International Development Agency)
HAPs	Specific health action plans
HCB	Hidroeléctrica de Cahora-Bassa
HDI	Human Development Index
HDSA	Sul-africanos Historicamente Desfavorecidos
HEST	Higher Education Science and Technology Project for Mozambique
HIA	Health impact assessment
HICEP	Hidráulica do Chokwé Empresa Pública
HIV	Human immunodeficiency virus
HMIS	Health management information systems
HR	Human resources
HTM	HIV & AIDS, tuberculosis and malaria
IAF	Inquéritos Agregados Familiares (Household Surveys)
IAF	Inquéritos aos Agregados Familiares
IAI	Inquérito Agrícola Integrado (Integrated Agricultural Survey)
IAM	Instituto de Algodão de Moçambique (Mozambican Cotton Institute)
IAN	Índice de Ambiente de Negócios – Business Confidence Index (BCI)
ICC	International Capital Corporation
IESE	Instituto de Estudos Sociais e Económicos (Institute for Economic and Social Research)
IFC	International Finance Corporation
IFI	International financial institution
IFTRAB	Inquérito Integrado à Força de Trabalho (Integrated Labor Survey)
IGEPE	Instituto de Gestão das Participações do Estado
IIAM	Instituto de Investigação Agrária de Moçambique (Mozambican Institute of Agrarian Research)
IIM	National Malaria Indicator Survey
IIM	Inquérito as Indústrias Manufactureiras (Manufacturing Industries Survey)
ILO	International Labor Organization
ILO	Organização Internacional do Trabalho
IMF	International Monetary Fund
IMF	Fundo Monetário Internacional
INAE	Instituto Nacional de Actividades Economicas – National Institute of Economic Activities
INATUR	Instituto Nacional do Turismo
INCAF	Inquérito Contínuo aos Agregados Familiares (Continuous Household Survey, panel data set)
INCAF	Inquérito Contínuo aos Agregados Familiares
INE	Instituto Nacional de Estatística – National Statistics Institute
INEFP	National Institute for Employment and Professional Training
INEFP	Instituto Nacional para o Emprego e Formação Profissional
INFOR	Inquério ao Sector Informal (Informal Sector Survey)
INP	Instituto Nacional de Petróleo
INSIDA	Inquérito Nacional de Prevalência, Riscos Comportamentais e Informação sobre o HIV e SIDA
IOF	Inquérito aos Oracamentos Familiares (Household Budget Survey)

IOM	International Organization for Migration
IPA	Investment Promotion Authority
IPEME	Institute for the Promotion of Small and Medium Enterprises
IPR	Análise da Política de Investimento - Moçambique
IRRI	International Rice Research Institute
ISCTEM	Instituto Superior de Ciências e Tecnologia de Moçambique
ISIC	International Standard Industrial Classification
ISO	International Organization for Standardization
ISPC	Imposto Simplificado para Pequenos Contribuintes – Simplified Tax for Small Taxpayers
IT	Information technology
JaU	Janela Única – Single Window Trade Management System
JFS	Grupo João Ferreira dos Santos (JFS Holding)
JPSL	Jindal Steel and Power Limited
JV	Empreendimento Conjunto
KMAD	Kenmare Moma Development Association
LAM	Linhas Aéreas de Moçambique
LC	Local content
LDH	Mozambican Human Rights League
LEITI	Liberia Extractive Industries Transparency Initiative
LNG	Liquefied natural gas
LNG	Gás Natural Liquefeito
LP	Local procurement
LSP	Large-scale project
M&E	Monitoring and evaluation
MCP	Multiple concurrent sexual partners
MDR	Multidrug-resistant
MF	Ministry of Finance
MFI	Instituição de Micro-Finanças
mgj	Million gigajoules
MIC	Ministry for Industry and Commerce
MIC	Ministério da Indústria e Comércio
MIC	Ministry for Industry and Commerce
MICE	Meetings, incentives, conferences and exhibitions
MICOA	Ministério de Coordenação Ambiental
MINPLAN	Ministry of Planning
MIREM	Ministry of Natural Resources and Mining
MIREM	Ministério de Minerais e Recursos Naturais
MISAU	Ministério de Saúde
MITRAB	Ministério do Trabalho (Ministry of Labor)
MITUR	Ministério do Turismo de Moçambique
MMAS	Ministério da Mulher e Coordenação da Acção Social
MMSD	Projecto de Mineração, Minerais e Desenvolvimento Sustentável
MOH	Ministry of Health
MOZAL	Mozambique Aluminum
MPD	Ministry of Planning and Development
MPD	Ministério da Planificação e Desenvolvimento
MRDC	Mineral Resources Development Company
MT	Metical
Mtpa	Metric ton per annum
MZN	Mozambican Metical
NCDMB	Nigerian Content Development and Monitoring Board
NDPI	National Directorate of Public Investment
NEITI	Nigerian Extractive Industries Transparency Initiative
NEP	Net economic profitability
NFA	Net Foreign Assets
NGO	Non-governmental organization
NGO	Organização Não-Governamental

NNPC	Nigerian National Petroleum Corporation
NORAD	Norwegian Agency for Development assistance
NRC	Nigeria Railway Corporation
NUIT	Numero Único de Identificação Tributária - SingleTax IdentificationNumber
ODAMoz	Official Development Assistance to Mozambique Database
OECD	Organization for Economic Co-operation and Development
OGE	Orçamento Geral do Estado (General State Budget)
OMR	Observatório sobre o Meio Rural
OOH	Occupational Outlook Handbook
OOH	Manual do Panorama Ocupacional
OPEC	Organization of Petroleum Exporting Countries
OTM	Organização dos Trabalhadores de Moçambique (Workers' Organization of Mozambique)
PACDE	Projecto de Desenvolvimento Empresarial e de Apoio à Competitividade
PACI	Partnering Against Corruption Initiative
PARPA	Plano de Acção pela Redução de Pobreza Absoluta – Poverty Reduction Plan
PARPA	Plano de Acção para a Redução da Pobreza Absoluta
PARPA II	Absolute Poverty Reduction Action Plan II
PDA	Porgera Development Authority
PEDSA	Strategic Plan for Agricultural Development
PEN III	Plano Estratégico Nacional de Resposta ao HIV e SIDA: 2010 – 2014
PHAMESA	Partnership on Health and Mobility in East and Southern Africa
PHCN	Power Holding Company of Nigeria
PIH	Permanent Income Hypothesis
PIMI	Public Investment Management Index
PIP	Public investment program
PIREP	Integrated Program for Professional Education Reform
PIREP	Programa Integrado da Reforma da Educação Profissional
PLA	Project Labour Agreement
PLoA	Porgera Land Owners Association
PNCT	National Program to Control Tuberculosis
PNG	Papua New Guinea
PODE	Projecto de Desenvolvimento Empresarial
PPD	Public-Private Dialogue
PPP	Public-private partnerships
PPP	Parceira Público-Privado
PRAP	Poverty Reduction Action Plan
PSWG	Private Sector Working Group
PWYP	Publish What You Pay
RBL	Empresa Pública do Regadio do Baixo Limpopo
REER	Real effective exchange rate
REER	Taxa de Câmbio Real Efectiva
RER	Real exchange rate
RM	República de Moçambique
ROM	Republic of Mozambique
RSA DAFF	Republic of South Africa, Department of Agriculture, Forestry, and Fisheries
RTCM	Rio Tinto Coal Mozambique
RWI	Revenue Watch Institute
SADC	Southern Africa Development Community
Sasol	Sasol Petroleum International – Mozambique
SEZ	Special economic zone
SIA	Social impacts assessment
SIMA	Sistema de Informação de Mercados Agrícolas de Moçambique (Agricultural Market Information System of Mozambique)
SME	Small and Medium-sized Enterprise
SME	Pequenas e Médias Empresas (PME)
SMEELP	Programa de Fortalecimento das Pequenas e Médias Empresas
SNV	Netherlands Development Organization

SNV	Organização Holandesa para o Desenvolvimento
Sonangol	Grupo Sonangol
SPEED	Support Program for Economic and Enterprise Development
SPEED	Programa de Apoio para o Desenvolvimento Económico e Empresarial
SSA	África Subsaariana
STD	Sexually Transmitted Disease
SWF	Sovereign wealth fund
TA	Assistência Técnica
TB	Tuberculosis
TIA	Trabalho de Inquérito Agrícola (Agricultural Survey)
TIPMOZ	Trade and Investment Program in Mozambique
TRIMS	Trade-related investment measures
U.S.EIA	United States Energy Information Agency
U.S.NOAA	United States National Oceanic and Atmospheric Administration
UEM	Eduardo Mondlane University
UEM	Universidade Eduardo Mondlane
UGC	União Geral das Cooperativas
UNAIDS	United Nations AIDS Program
UNCTAD	United Nations Conference on Trade and Development
UNCTAD	Conferência das Nações Unidas sobre Comércio e Desenvolvimento
UNDP	United Nations Development Program
UNGC	United Nations Global Compact
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organization
UNITA	National Union for the Total Independence of Angola
UNODC	United Nations Office on Drugs and Crime
UNU	United Nations University
UNU	Universidade das Nações Unidas
USAID	United States Agency for International Development
USAID	Agência Americana para o Desenvolvimento Internacional
USD	United States Dollar
VAT	Value Added Tax
VDPA	Vienna Declaration and Program of Action
VFR	Visiting friends and relatives
VMMC	Voluntary medical male circumcision
WB	The World Bank
WB	Banco Mundial
WBCSD	Conselho Empresarial Mundial para o Desenvolvimento Sustentável
WEF	World Economic Forum
WHO	World Health Organization
WIDER	World Institute for Development Economics Research
WIDER	Instituto Mundial para a Pesquisa da Economia de Desenvolvimento
WTO	World Tourism Organization
WTTC	World Travel and Tourism Council

CHAPTER 1.1
POLICY - IMPACTS
MOZAMBIQUE´S COMING NATURAL
RESOURCE BOOM - EXPECTATIONS,
VULNERABILIES, AND POLICIES
FOR SUCCESSFUL MANAGEMENT

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EXECUTIVE SUMMARY

Mozambique is set to become a world-class natural resource exporter with projections indicating that it will experience rapid increases in windfall revenues over the next several decades and well beyond. While this is welcome news for a low-income country with a substantial proportion of the population below the poverty line, it foreshadows some economic management problems ahead. The main concern is the poor economic record of many other low-income countries with large natural resource endowments. It is remarkable how often these countries have experienced inferior rates of growth compared with countries lacking such endowments. This pattern, known as the “natural resource curse”, has been documented in empirical research across a wide sample of nations.

The first section of this study reviews the research that examines the causes of this resource curse in low-income countries. Three channels of transmission are highlighted through which abundant resources can lead to poor economic performance: volatility, Dutch Disease effects, and institutional weaknesses. Taking volatility first, world commodity prices are extremely volatile. Countries with low diversification and a large share of resources in GDP (Gross Domestic Product) therefore suffer large swings in revenues and growth per capita. Such high volatility and boom and bust cycles are shown to be harmful to economic growth, particularly where financial markets are less developed. Empirical research finds that volatility is a key cause of the “resource curse” problem. Volatility is harmful to growth because cyclical shifts of resources (labor, land, equipment) back and forth across economic activities incur costs (particularly transaction costs). Frictional unemployment and incomplete utilization of capital raise costs and reduce productivity. Volatility in commodity prices and revenues in developing countries often leads to macroeconomic and political instability because monetary and fiscal policy often tends to be pro-cyclical – expansionary in booms and contracting in busts, adding to extent of volatility (resource riches create incentive to borrow and spend and booms act to undercut political decision-making and create false sense of security, encouraging wasteful investment, increases in government employment and benefits, expansion of welfare programs, etc.) In addition, there are pro-cyclical private capital inflows as speculators move into local assets.

Dutch Disease refers to the negative adverse spillover effects of booming resource exports. Four major Dutch Disease effects are emphasized in research on the resource curse: (a) large inflows of foreign exchange (export revenues and FDI inflows) cause real exchange rate appreciation; (b) windfall revenues cause a huge increase in spending (from firm profits, worker incomes, government tax and royalty receipts); (c) real appreciation and the spending effect influence relative prices in the economy causing expansionary and contractionary effects (expansionary effects are associated with increases in non-tradable prices and output, contractionary effects are associated with a decline in non-resource tradables – manufacturing, agriculture, and tourism); (d) finally, real appreciation and the spending effect create incentives for labor and capital to move into booming sector and non-tradables production, which can cause a further decline in the non-resource tradables sector.

Two important impacts on the economy result from Dutch Disease. First, the decline of non-resource tradables can have adverse effects on future growth, as tradables are “special” in that they are crucial for technical change in economy. Second, there are welfare effects that cause a redistribution of income in the economy: (a) firms and workers in the booming resource sector gain (higher profits and incomes); (b) government benefits from higher taxes and dividends; (c) producers of non-tradable goods and services gain; (d) primary losers will be producers of non-resource tradables (including import-competing activities). Thus, there will be losers and this is a big part of the Dutch Disease problem.

Lastly, resource booms in low-income countries have been found to have a significant influence on the quality of institutions and this has been shown to be a major channel through which the resource curse influences growth. Booming revenues can worsen governance resulting in corruption and policy mismanagement undermining growth. It is also important to note that the effects of a resource boom on the economy (e.g., macroeconomic stability and growth) are moderated by the quality of a country’s institutions.

Countries with strong institutions at the start of a resource boom are shown to do much better, often turning a possible curse into a blessing. Countries with weak institutions are shown to do much worse. Finally, “point-source resources” (oil, gas, minerals, diamonds) are found to have the most negative effects on a country’s institutions because of the central command of resource revenues by government.

Given this background, section 2 of the study turns to Mozambique’s vulnerabilities to the possible adverse effects of the coming resource boom. The first issue is the expected extent of the coming boom and its impact on the economy. Recent IMF estimates (which were made before the large Anadarko and ENI gas discoveries) assume a 50% rise in Sasol’s natural gas production and start of coal production by Vale and Rio Tinto, with full capacity by reached by 2020, project a boost to mega-project share in GDP from a current 8-10% to 18-20 % by about 2016 to 2020. Adding to this estimate the new Anadarko and ENI gas discoveries would increase the share of mega-projects in GDP to around 40-50% (assuming the value of the discoveries to be about 400 billion dollars over 4 decades, exports of 10 billion dollars per year, extraction companies take 50% share, Mozambique’s revenues would be roughly 5 billion dollars, gas-related mega-projects would then add another 20% to IMF projected GDP in year 2020).

This huge projected increase in foreign exchange revenues is likely to expose several key vulnerabilities in Mozambique’s economy that could lead to adverse effects on growth. The first is volatility. Data show Mozambique already experiences high volatility in key economic variables. A striking feature of the real exchange rate over the past several decades has been persistent volatility. High exchange rate volatility can reduce investment, productivity, and growth and have negative effects on tradables. Risks of volatility-related effects are apt to grow larger as Mozambique’s export basket shifts from aluminum towards coal and gas. Coal and natural gas prices are much more volatile than aluminum prices – gas by a factor of 2 and coal by a factor of 3, over the past decade.

Second is sensitivity of the real exchange rate to various boom-related shocks. A key adverse effect of resource booms is real appreciation of the exchange rate. The study carries out an econometric analysis of the major determinants of long-run movements of the metical exchange rate to examine its sensitivities to commodity price shocks, as well as supply-side and demand-side shocks. The study finds that metical is a “commodity currency” like the currencies of some other important commodity exporters – it appreciates when prices of the export commodities Mozambique exports rise and depreciates when they fall. The study shows that the real world-price of aluminum has a significant and stable effect on the metical real exchange rate – a 10 % increase in real commodity price results in a 1.7% real appreciation in the metical. This underscores that a key vulnerability in the coming resource boom will be sensitivity of metical to commodity price fluctuations. The econometric exercise also finds that supply-side shocks (e.g., differential growth rates per capita verses Mozambique’s trading partners) are determinants of long-run real exchange rate movements – a 10 % increase in differential growth rates causes a 5 % real exchange rate appreciation. Lastly, the study finds that capital inflows (measured by net foreign assets) play a significant role in determining movements in the real exchange rate, however the coefficient is negative. It appears that capital inflows over the last decade have been associated with large economic leakages (imports, profit remittances), as well as foreign exchange market interventions by the Bank of Mozambique.

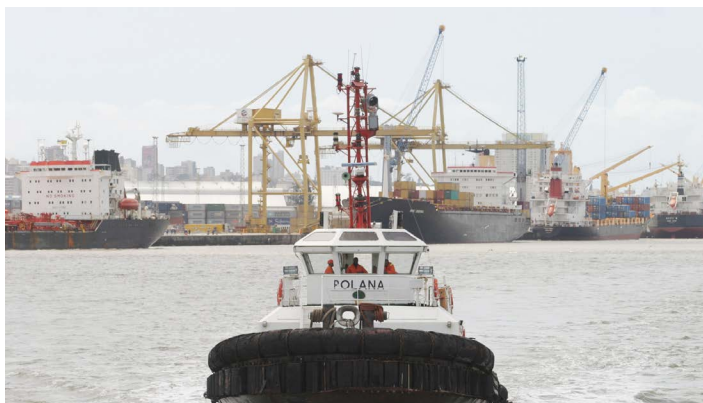
A third significant vulnerability is the quality of Mozambique’s institutions. The outlook for low-income countries with weak institutions before resource a windfall is particularly worrying. The World Bank’s Governance Indicators for Mozambique 1996-2010 show that the country scores poorly in government effectiveness, corruption, and rule of law and these scores have not improved much over the past 15 years. Areas of relative strength are observed in the indicators for voice and accountability and political stability – there has been a large improvement over period. The fact that government effectiveness, corruption, and rule of law continue to be the weakest areas is worrying because all research shows that “point-source” resource exports like coal and gas are problems for countries lacking strong institutional capability. Government of Mozambique’s adoption of the Extractive Industry Transparency Initiative (EITI) is a positive sign for the future.

All these vulnerabilities, plus the market imperfections endemic to an economy like Mozambique's, embryonic financial markets, scarce skilled labor, and inadequate infrastructure, reduce the country's absorptive capacity. The ability to absorb a large resource windfall is extremely limited in the short to medium-run. Spending on investment or consumption will quickly run into bottlenecks, reducing the value of this spending. The most basic problem is steep supply curves, particularly for non-tradable goods and factors, causing spending to result in higher prices, including real exchange rate appreciation, rather than associated increases in output. Steep supply curves are caused by (a) critical shortages in "home-grown" capital (skills, infrastructure) for production of non-tradables and (b) inefficiencies and constraints in the business environment. Overcoming bottlenecks and building the economy's absorptive capacity will take time. Bottlenecks can be avoided by importing, but not all necessary human and physical capital can be imported (some must be "home-grown"), and importing everything is not politically feasible or good for long-run development in Mozambique. Absorption constraints, even at this very early stage of the coming boom, are already beginning to show up in rising prices of non-tradables, particularly in urban centers (e.g., real estate, skilled labor).

The last section of the study takes up a discussion of policy options for managing the coming resource boom. There are several overarching boom-related and Mozambique-specific economic constraints that policy formulation must consider:

- Resource revenues result from depleting a finite stock of resources, so they are temporary;
- Resource revenues are highly uncertain, as commodity prices are highly volatile;
- A low-income, capital-scarce country like Mozambique needs to raise consumption to reduce poverty, as well as increase investment in public goods (education, infrastructure, etc.) to grow faster;
- The current capacity in Mozambique to rapidly absorb windfall revenues is quite limited; the investment process in the country is not capable of delivering high returns on very large volumes of investment; and
- Capacities associated with effective governance and economic management are still weak.

These constraints to policy formulation mean that (a) policies for managing revenues are constrained by absorptive capacity and (b) adverse effects of the coming boom are likely to be stronger. Hence, policy will also have to explicitly address volatility and Dutch Disease problems.



Port of Maputo

The top priority of revenue management should be to raise domestic investment, both public and private, to increase growth and boost consumption. Implementing this priority involves complications – low absorptive capacity which severely constrains potential investment returns. Until investment capacity is improved, there is no other practical option than to buy time by accumulating resources in a Sovereign Wealth Fund (SWF) or broader Natural Resource Fund (NRF), which can invest both at home and abroad. As a form of national savings, these Funds ensure that gains are partially shared with future generations.

However, it will be important not to allow the overseas investment operations of the Funds to delay improvements in absorptive capacity at home. Safeguards needed to be built-in to ensure Funds are not raided by politicians – the ultimate safeguard is transparency (the EITI is a positive program in this regard). Government's role in raising investment must also involve policies to stimulate more private sector investment (e.g. improve the investment environment). Government investments in infrastructure will be complementary to these policy initiatives.

The second important priority is to allocate a fraction of revenues directly to citizens. It is important to raise consumption straight away to address poverty and this increase in incomes would help finance some private sector investments. Direct distributions of revenues to citizens also would reduce some of the risk of public misuse of resources and establish the principle that resources belong to all of Mozambique's citizens. Given the volatility of revenues, however, consumption should be raised slowly to avoid future costly roll-backs.

Implementing direct distributions to citizens will not be easy in Mozambique and would take some time to develop. Currently there is no system of citizen registration and not everyone is in the tax system. Given there is no infrastructure set up for direct distributions, a program running through central, district, and municipal governments will incur "leakages," but the task is not impossible – it has been done in other countries. The most efficient approach would be to use new technologies, e.g., biometric identification, smartcards and electronic payments into mobile bank accounts.

Dealing with the potential adverse effects of boom – coping with volatility and moderating Dutch Disease will have to be an explicit part of the policy package. First, coping with long-run volatility of resource depletion will involve making high-return investments in domestic assets to increase future incomes, as well as saving a portion of revenues for future generations. Coping with short-run volatility of commodity price fluctuations could be accomplished to some degree by indexing contracts with international extraction companies based on future market conditions with agreements to share gains and losses in some proportion. It could also be handled by stabilizing consumption expenditures, which are economically and politically the most sensitive economic variables, and allowing the investment rate to fluctuate, which is shown to have much less influence on economic performance.

Intervening to moderate Dutch Disease the best option is the Sovereign Wealth Fund (SWF) or Natural Resource Fund (NRF). The Funds reduce spending effects in economy and generate capital exports. This is a special kind of exchange rate protection policy, which benefits firms in the lagging, non-resource tradable sectors in a uniform way, not selectively. Another way to protect the exchange rate is accumulating reserves via foreign exchange intervention by the Bank of Mozambique. However, over the long run this policy option has some difficulties. Once the Bank of Mozambique has enough reserves (judged by precautionary and monetary criteria) it is costly as a long-run strategy. The third option to moderate Dutch Disease is selective protection (e.g., subsidies, tax breaks, tariffs), however this is a much less desirable policy option than the option of exchange rate protection. Selective, uneven protection can be quite difficult to manage, inefficient, and generate rent-seeking.

The welfare effects of interventions to moderate Dutch Disease should be a focus of attention in managing these interventions. First, there will be losers (e.g., firms benefiting from more capital investment in Mozambique rather than abroad); and winners (e.g., firms in non-resource tradable sector) as a result of the intervention to manage Dutch Disease; so there will be a redistribution of income in economy. Second, the interventions impose costs in form of potential underinvestment in Mozambique – if revenues go to lower-return foreign investments (via the sovereign wealth fund) over higher-return investments in Mozambique, then intervention results in a "cost of protection". The policy argument in this study is that the "cost of protection" imposed by allocating revenues to a Fund, today, is low, given low absorptive capacity. But this cost will rise as capacity improves in the economy; hence, revenues should be allocated over time more and more towards raising the domestic investment rate.

INTRODUCTION

The causes of the pattern known as the "natural resource curse" have been traced to important negative spillover effects that come from heavy specialization in natural resource exports, and it has been shown that these adverse effects can be especially pronounced in low-income countries with embryonic financial markets and weak institutions. Importantly, there is also evidence that resource-rich countries can do something about this problem. Resource wealth is not necessarily a one-way ticket to inferior economic outcomes. More accurately, natural resource wealth is a situation that bestows

mixed possibilities, conferring both benefits and risks. The priority for any country should be to magnify the benefits and identify ways to manage the economy around the risks and problems that have badly affected other natural resource producers in the past, and, in doing so, put the economy on a successful development trajectory.

This study examines the coming resource boom in Mozambique and its implications for future economic development prospects. To set the stage for our assessment of possible effects on the economy, section 1 reviews the empirical research on the resource curse in low-income countries and its causes. Given this backdrop, section 2 then investigates Mozambique's economic vulnerabilities to the types of adverse effects that can be generated by a resource boom. Finally, with this knowledge of potential vulnerabilities in hand, section 3 outlines a set of policy options for managing the coming windfall revenues and dealing with specific adverse effects of a boom.

1. NATURAL RESOURCE WEALTH AND ECONOMIC PERFORMANCE: THE EXPERIENCE IN DEVELOPING COUNTRIES

1.1. THE GROWTH RECORD OF RESOURCE-RICH COUNTRIES

It has been known for some time that resource abundance does not inevitably bestow economic success. Many countries have achieved high and sustained living standards lacking virtually any exportable resources, while many countries rich in oil and gas, minerals, and precious stones, continue to have low levels of per capita income and generally poor economic performance.

This relationship between natural resource wealth and economic performance, often called the “paradox of plenty” or the “natural resource curse”, is depicted in Figure 1. The scatter diagram presents the correlation between average growth rate of GDP and the percent of natural resources in total exports for a sample of countries over approximately four decades. In general, the relationship is shown to be negative. Countries, such as China and Korea, with low exports of natural resources, exhibit high growth rates, and countries with high exports of natural resources, such as Zambia, Nigeria, Venezuela, and Gabon, exhibit low growth rates. However, this negative correlation, as one can observe from the slope of the line running through the data, is not highly robust. Some countries with resource abundance manage to do well. What is perhaps most striking about the scatter diagram is that the overall relationship is not shown to be positive in all cases. Intuitively, one might expect to see countries with lots of natural resource exports perform spectacularly well.

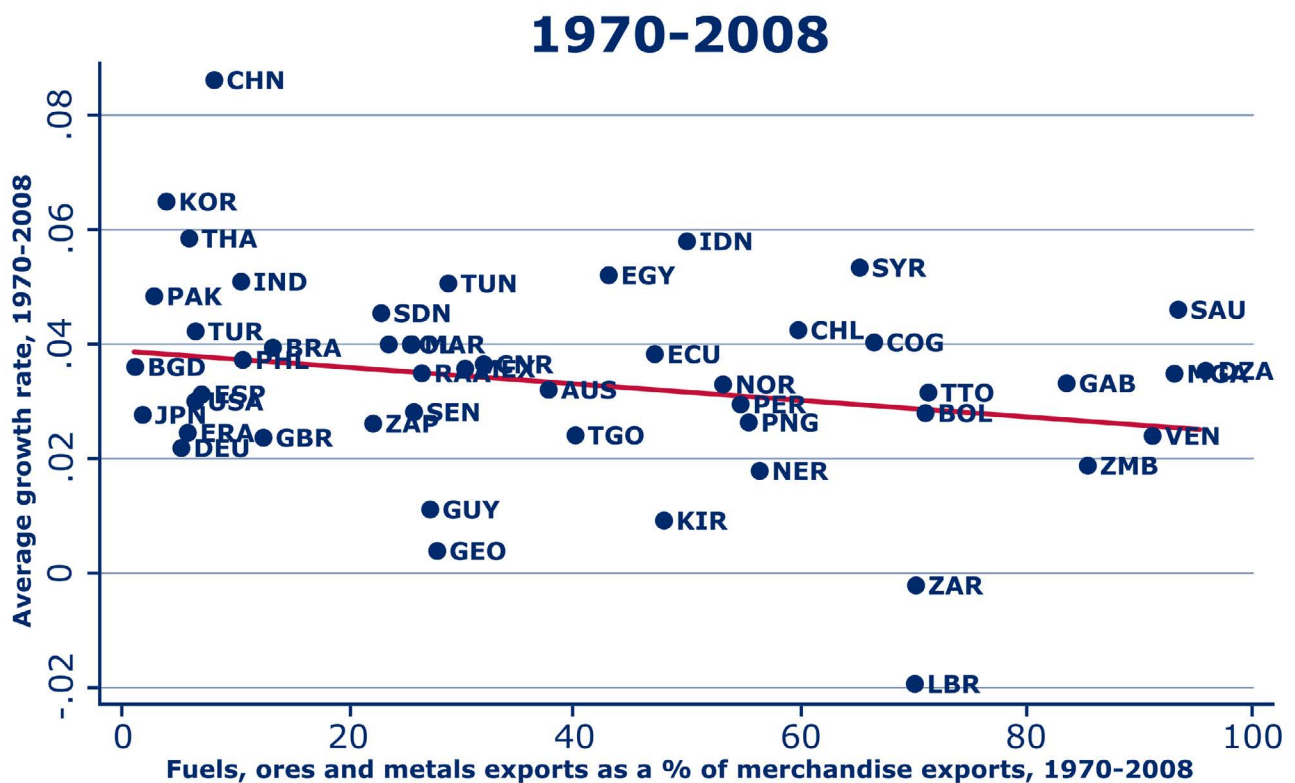
This negative link between resource wealth and growth has also been confirmed by statistical tests of the determinants of economic performance across countries, where one can control for other factors determining growth. Sachs and Warner (1995, 2001), for example, find that resource abundance is strongly associated with slower growth, after controlling for traditional growth drivers, such as initial income levels, domestic investment rates, openness to trade, and institutional development. The authors also claim (a) that their results are robust to different ways of measuring resource abundance (b) that there is no direct evidence of omitted geographical or climate variables explaining the result, and (c) that there is no bias in their estimates stemming from other unobserved, growth-constraining variables. Sachs and Warner state that this “empirical support for the resource curse is not bullet proof, but it is quite strong.” Several other cross-country regression studies support this finding, especially for point-source resources, such as oil (Ross 2001; Sala-i-Martin and Subramanian 2003; Smith 2004; Ploeg 2007)¹.

Notwithstanding this evidence that natural resource dependence can have detrimental impacts on economic performance, the natural resource curse is not inevitable.

¹ While overall the empirical literature on the topic concludes that, at least in LDCs, large endowments of certain types of resources have a negative impact on economic growth, some researchers have questioned the results of these cross-country studies on the grounds that the regressions suffer from various problems of omitted variable and endogeneity bias and measurement error. Panel data has been used in some studies to avoid these problems and these studies have found the same negative association between resources and growth. However, both cross-country and panel-data results are sensitive to changing sample periods, different country samples, and definitions of various explanatory variables. In the end, the data may not allow us to really nail things down with unquestionable precision because it is difficult to distinguish between important drivers of growth, as all of the variables generally employed as explanatory variables are highly correlated.

Figure 1 makes this clear. There are examples of countries around the world that have managed to escape the curse despite having large shares of natural resources in exports. Botswana, for example, has been a leading African growth performer, despite the fact that 40 percent of its GDP comes from diamonds. Botswana began its post-colonial development with low investment rates in both human and physical capital and substantial inequality. Since then, it has maintained high investment rates, particularly in education, substantially reduced inequality, and, from 1965 on, enjoyed one of the world's highest rates of growth. Norway is the world's third largest oil exporter, but it maintains high growth rates of GDP, has well-developed institutions, good economic policies, and little corruption. Latin American countries, such as Chile, Brazil, and Peru, which for the most part abandoned heavy-handed state interventions in natural resource sectors, encouraged foreign investment in mining, and increased property rights in mining investment, have been able to achieve high growth rates. The United Arab Emirates and Dubai, despite some of the world's largest oil reserves, have managed to escape the resource curse through economic diversification, modernization of infrastructure, job creation, and well-functioning state welfare systems.

FIGURE 1: STATISTICAL RELATIONSHIP BETWEEN NATURAL RESOURCE EXPORTS AND GROWTH



Source: Frankel (2011); from data source: World Development Indicators, World Bank

Hence, it is not that countries with natural resource wealth will automatically achieve poorer performance than those countries lacking resources. Resource-rich countries can be successful. The question is how to make the best use of the abundant resources at hand. The central objective should be to achieve the growth record of the countries that have managed to escape the resource curse rather than suffer the disappointments of those that have not. The first step in this process is to understand the possible negative spillover effects from specialization in natural resources. In the next section, we examine the channels through which natural resources impact economic performance and explain how they work to reduce growth.

1.2. WHY DO MANY RESOURCE-RICH COUNTRIES SUFFER FROM THE PARADOX OF PLENTY?

Recent research highlights three channels of transmission through which abundant resources can lead to poor economic performance (Ploeg 2011, Frankel 2011). First, the extreme volatility of commodity prices on world markets can be detrimental to growth. Second, natural resource booms can cause real exchange rate appreciation, which undermines the competitiveness of other, non-resource tradable sectors. Third, huge revenues from natural resource exports, together with growing state command of resources, can encourage a host of governance, rent-seeking, and institutional development problems that undermine growth. Each of these transmission channels is reviewed in greater detail below.

VOLATILITY

World commodity prices are extremely volatile, far more so than prices of manufactured products or services. Crude oil and natural gas exhibit the highest price volatility, with a standard deviation of more than 30 percent (Ploeg 2010). Prices of basic food commodities come next, followed by prices of ores and minerals. The least volatile of the commodities cohort is agricultural raw materials, but even here, price volatility is still much higher than in the cases of manufactures or services. World market price volatility, particularly of point-source commodities, is high because short-run price elasticities of supply and demand are low. As a consequence, relatively small changes in demand or supply require large changes in price to restore market equilibrium.

For countries that lack diversification and have a large share of natural resources in GDP and in exports, volatile prices mean large swings in revenues and in growth per capita. Countries with a share of natural resource exports in GDP greater than 20 percent have a standard deviation in annual growth of GDP per capita of 7.4 percent, while countries with a ratio of resource exports to GDP of less than 6 percent have a standard deviation of growth of just 2.8 percent (Ploeg 2010). The Middle East and sub-Saharan Africa are the poster children for the high volatility cohort. The Middle East, with its high dependency on oil, has the highest volatility, with a standard deviation in annual growth of GDP per capita of 8 percent. Sub-Saharan Africa is a close second, with average volatility of annual output per capita of 6.5 percent. In highly diversified economies like the US and Europe, annual growth volatility drops to very low levels of just around 2 percent.

It is high volatility and boom and bust cycles that are shown to be harmful to economic growth, particularly in countries with underdeveloped financial markets. Blattman et. al. (2007), using a century-long time series of country commodity prices on a sample of developed and developing countries, found that, if one looks at development over the long run – from 1870 to the 1940s – countries whose commodity endowments were more volatile in price grew much more slowly. In fact, commodity volatility is shown to be among the best long-term predictors of which countries grew rich and which others remained poor. Mansano and Rigobon (2001) found that the effect of resource dependence on growth is mainly driven by boom and bust cycles, produced by swings in commodity prices, high debt, and credit constraints, rather than other factors. Finally, Ploeg and Poelhekke (2010) showed that the indirect negative effect of resource exports on growth, transmitted via the volatility channel, out-weighs any positive effect of resources on growth. They argue that volatility appears to be the core of the resource curse problem, but its impact is offset to some degree in countries with well developed financial markets.

Why is volatility so detrimental to growth? Frankel (2011) highlights the costs of volatility on the economy. He writes that “cyclical shifts of movable resources (labor and land) back and forth across sectors – mineral, agricultural, manufacturing, services – may incur needless transaction costs. Frictional unemployment of labor, incomplete utilization of the capital stock, and incomplete occupancy of dwellings are true deadweight costs, even if they are temporary.” Aghion et. al. emphasize the effect of commodity price volatility on real exchange rate volatility. They demonstrate that commodity price volatility leads to real exchange rate volatility, which, in turn, harms long-term productivity growth, especially in countries

with underdeveloped financial markets. Ploeg and Poelhekke (2009) stress the impact of commodity price volatility on liquidity constraints. They show that, when commodity prices are volatile, liquidity constraints in the economy are more apt to bind and, as a consequence, investment, innovation, and growth decline.

In addition, volatility is often amplified in developing countries by domestic macroeconomic and political instability. Monetary and fiscal policy in these countries are generally pro-cyclical rather than countercyclical, just the opposite of what the theory of inter-temporal optimization calls for. Rather than acting as a countercyclical force moderating swings, monetary and fiscal policy tends to be expansionary in booms and to contract in busts, adding to the extent of fluctuations. Pro-cyclical capital flows often exacerbate the volatility further.

Several reasons have been put forward to explain the pro-cyclical policy phenomena. One is that resource riches (much higher tax receipts and royalties) create an incentive to borrow and spend excessively (Mansoorian 1991; Manzanano and Rigobon 2001; Arezki, Hamilton and Kazimov 2011). Another is that resource booms often act to undercut political decision-making and create a false sense of security. This can encourage investment in wasteful projects, sustain bad policies and increase policy mismanagement, induce large expansions in state welfare programs, and trigger hefty increases in government employment and benefits. Many studies have shown that this type of hyperactive fiscal policy is much more apt to be pro-cyclical in developing countries than in developed countries (Mendoza and Terrones 2008). On top of this, during a resource boom, pro-cyclical capital flows tend to pick up considerably, as speculators move in to snap up local assets – real estate, and stocks and bonds where there are equity and fixed asset markets. For example, during the commodity boom of the 2000s, net capital flows have been highly pro-cyclical to emerging markets (Frankel 2011).

DUTCH DISEASE EFFECTS

Dutch Disease is a name given to some negative spillover effects of a natural resource export boom, or some other transfer effect, such as foreign aid, which produces a surge in extra wealth for the country (for details see Corden and Neary, 1982; Corden, 1984). Spillover effects can occur when there is a substantial rise in the price of existing resource exports, or alternatively, when there is a big new natural resource discovery. The ensuing large inflows of foreign exchange from booming exports cause an appreciation in the real exchange rate. A further side-effect can come from foreign capital flows into the booming resource sector to finance its development. These inflows of foreign capital also cause real exchange rate appreciation. In the case of a floating exchange rate, real appreciation occurs via a nominal appreciation of the currency and in the case of a fixed exchange rate real appreciation is produced by way of a change in the price level.

Resource windfalls also bring about a huge increase in spending. Spending in the booming sector rises because of higher profits induced by price and output increases, as well as the increase in FDI flows. Some of the spending involves an outflow of funds from the country, as it goes to imports, remittances of dividends abroad, and to the purchase of various foreign assets. These outflows act to partially depreciate the real exchange rate, moderating the initial appreciation. The part of the windfall not spent abroad is spent domestically – this is called the “spending effect” of the resource boom on the economy. These funds are spent directly by firms involved in the resource boom, or indirectly by those receiving higher windfall-related incomes. Additionally, higher government tax revenues and royalties generated by the windfall will lead to increased public spending, as we noted above.

Windfall-related exchange rate appreciation and the spending effect influence relative prices in the economy, causing expansionary and contractionary effects in different sectors².

² The extent to which a nominal exchange rate appreciation affects prices will depend on the magnitude of the Exchange Rate Pass-Through (ERPT). In most low-income countries, the ERPT is quite high (upwards of 60 to 70%). Assuming that most exports are not consumed locally, nominal appreciation via the ERPT will mostly impact the import-competing prices component of the CPI (Center for Investment Promotion). On the other hand, the spending effect will impact the non-tradable prices component of the CPI, as tradable prices are determined on world markets (following the Law of One Price).

One can divide economic sectors into tradables and non-tradables. Tradable sectors include exports and import-competing activities, which can be broken up further into resource exports (the booming sector) and non-resource exports and import competing activities (the lagging sector). Tradable prices are determined in world markets, and thus are set by world prices and the exchange rate. Non-tradable prices, such as prices of housing and haircuts, are determined by domestic supply and demand. On the expansionary side, as prices of non-tradables are determined domestically, the spending effect of the boom puts upward pressure on prices of non-tradable goods and services and output expands (the magnitude depending on supply elasticities in the sector). Because tradable prices are determined in world markets and are not affected by domestic spending, prices of non-tradables will rise relative to tradable prices. This increase in the relative price of non-tradables will trigger a further real appreciation of the exchange rate. On the contractionary side, there are two consequences of the boom for non-resource tradables: (a) real appreciation of the exchange rate reduces profitability and competitiveness of non-resource exports (manufacturing, agriculture, and tourism) and output and exports decline and (b) rising prices and output of non-tradables push up wages (particularly of skilled labor) in non-tradables, which spills over to the rest of the economy, causing profits to fall further in non-resource tradables, seeing as output prices are fixed by world markets.

In the longer run, structural changes will occur in the economy as exchange rate appreciation and spending effects from the windfall create incentives for labor, land, and capital to move into non-traded and booming sector production, crowding out domestic output of non-resource tradables. Recent research shows the extent of the resource movement effect in response to the boom. Ismail (2010), using disaggregated sectoral data for manufacturing, finds that a 10 percent increase in the size of the resource windfall, on average, produces a 3.4 percent decline in value added across manufacturing. This effect is found to be smaller in countries that have restrictions on capital flows and in sectors that are highly capital intensive. Brahmabhatt et. al. (2010) show that, in countries where natural resources are more than 30 percent of GDP, the size of the tradables sector is 15 percent below what is considered normal, as defined by Chenery and Syrquin 1975. Lastly, Harding and Venables (2011), focusing on trade variables, show that structural changes in the balance of payments can be quite significant. Using data on 133 countries for the period 1975-2007, they find that the response to a one dollar increase in revenue from natural resource exports is a decrease in non-resource exports of 50 cents and an increase in imports of 15 cents. That corresponds to a decline in non-resource tradables (exports and import-competing activities) of 65 cents. Savings from the dollar's worth of natural resource revenues is 35 cents. These savings are primarily a change in net foreign savings, which are available for domestic investment, paying down debt, accumulation in a sovereign wealth fund, or, perhaps, direct distribution to citizens.

The decline of non-resource tradables can have an important effect on future economic growth. Non-resource tradables are thought to be “special”. They are considered to be the crucial wellspring of technological change in the economy, because production of tradable goods generates technological spillover effects (learning-by-doing and other positive external economies, such as economies of scale), that accrue to the rest of the economy (Wijnbergen 1984; Matsuyama 1992; Sachs and Warner 1992)³. In developing countries, tradables production is also a vital source of technology transfer from more advanced countries. Consequently, a reduction in the size of the non-resource tradables sector, because of Dutch Disease, can be harmful to long-term economic performance. Adverse effects on growth, however, may be offset to some degree by productivity advances in other activities. Production of non-tradables (for example, construction) may also benefit from learning by doing and other technological advances that spillover to the rest of the economy, although perhaps to a lesser extent than manufacturing (Torvik 2001). So can the booming sector. In many countries, oil and gas and minerals mining have achieved significant technological advances (Frankel 2010).

It is important to stress that the description of boom-generated structural changes above assumes economic responses occur instantaneously (or at least rapidly) without running into supply constraints and bottlenecks. Absorptive capacity of the economy, in other words, is assumed to be high – that is to say, capital (skills, equipment, infrastructure and so on) is presumed to be highly mobile and readily available on international markets, so that entrepreneurs do not encounter bottlenecks and relative prices do not have to change hugely to elicit a response.

³ Sala-i-Martin and Subramanian (2003) argue that the proposition that tradable sectors are “special” or “superior” because of learning-by-doing and other positive externalities—a necessary condition for Dutch Disease to exert a drag on long-run growth—is “largely unproven.” There is, however, a good deal of research showing that export-led growth of manufactures does promote increased technology transfer and faster productivity improvement.

But this assumption is rather naive for low-income economies, where market imperfections are endemic, and where financial capital and skills are scarce, infrastructure is inadequate, and institutions are embryonic. In such settings, capital is “sunk” and not highly mobile between sectors, secondary markets for equipment are generally lacking, and labor’s flexibility is constrained by regulations, market imperfections, and capability. Moreover, as Ploeg and Venables (2010) argue, some important types of capital (both human and physical) are ‘home-grown’ and non-traded, in that they cannot be bought on world markets. Further, production of many types of capital in low-income countries (for example, housing, infrastructure, equipment, and human capital) generally requires some non-tradable inputs, and consequently most new capital produced must be (partly) ‘home-grown’⁴.

Taken together, market imperfections of various kinds, capital immobility, labor inflexibility, and the fact that the economy has to accumulate ‘home-grown’ capital over time, work to limit absorptive capacity and thus constrain the ability to rapidly adjust to the new structure after a foreign exchange windfall. As a result, the adjustment path along which structural change moves will involve much stronger Dutch Disease effects – specifically, adjustment will involve larger relative price changes and economic agents will vary consumption and investment in response to this more volatile path of prices. In their model of resource windfalls and adjustment dynamics, Ploeg and Venables show that if “home-grown” capital is needed for development a foreign exchange windfall produces a sharper appreciation of the real exchange rate. As home-grown capital is accumulated over time, for example, by way of training programs to build worker skills, the real exchange rate gradually depreciates back toward its equilibrium level. In addition, when the boom in revenues hits the economy, real consumption jumps part, but not all the way, to its new, higher steady-state value. Consumers see the path of the appreciating real exchange rate and rising non-tradables prices and postpone some of the increase in real consumption, although nominal consumption may overshoot its new long-run value.

Some oil rich countries in the Middle East have been able to avoid these adjustment bottlenecks by importing everything. The problem of accumulating non-traded, home-grown capital was avoided by making virtually all capital tradable – human capital was imported by immigration of many types of skilled workers, and infrastructure was imported by importing all capital equipment and construction workers. However, in developing countries with large populations this option of importing everything is not politically feasible. Jobs are needed to employ young school-leavers (often a large and growing portion of the population) and to absorb surplus labor more generally. Hence, the problem of accumulating home-grown, human capital to raise absorptive capacity is a binding constraint. Several ways have been suggested to address this limitation, including placing some of the foreign exchange windfall in a sovereign wealth fund while absorption constraints are being fixed. We will discuss such policy options in more detail in the final section of this study.

What are the welfare implications of these Dutch Disease effects? Who are the winners and losers? First off, it is clear that firms and workers in the booming natural resource sector are winners, as they benefit from higher profits and incomes respectively, that derive from the windfall in export revenues. Given that this sector then pays ample taxes and royalties on its windfall revenues, benefits will accrue more widely to the government and, via more public services and investments, to the whole country. Other firms and workers will also benefit depending on how the pattern of demand changes in the economy as the spending effect ramps up – many producers of non-tradable goods and services, in particular, will benefit. The primary losers, when all is said and done, will be the producers of non-resource tradables and import-competing activities.

Does the country benefit overall? The country can potentially benefit in two ways. First, a potential benefit can accrue to the country via the increase in taxes generated by the windfall revenues of the booming resource sector, assuming the tax receipts are large and well spent. Unfortunately, the records of many resource-rich countries have not been good in this respect. In some cases, because of the contracts negotiated with foreign investors in the resource sector, taxes and royalties paid by extraction companies have not been as generous as they might have been (Frankel 2010; see Castel-Branco 2008 for Mozambique). Perhaps, more importantly, governments often have not invested taxes received wisely.

⁴ What makes capital ‘home-grown’ in some cases is due to political decisions – e.g., restrictions on importing certain types of labor, indigenization programs, import restrictions on certain types of capital equipment, domestic content restrictions on foreign investors, “buy-local” restrictions in government procurement and so on.

Many resource-rich African countries, for example, have not done a good job transforming exhaustible natural resources into productive assets at home or abroad (Ploeg 2010). According to a World Bank study (2005), much of resource-rich Africa has negative genuine saving⁵. That is to say, these countries are depleting their natural resource wealth faster than they are building up their assets (human and physical capital) and thus becoming poorer each year despite abundant natural resources. Second, a benefit to the whole country can accrue (in a Pareto optimal sense) if the beneficiaries of the foreign exchange windfall (booming natural resources) can potentially compensate the losers (non-resource and import competing tradables). The likelihood of full compensation ever being paid, however, is just about nonexistent. So, there will be losers, and in some cases the losses will be large. This is a big part of the Dutch Disease problem.

How should policymakers think about the Dutch Disease problem? While the resource boom is a positive wealth-generating development, spillover effects from the boom produce (a) a potential slowing of growth, generated by a decline in competitiveness of non-resource tradables and import competing activities, and (b) welfare effects that create winners and losers. One way to view these outcomes is simply as equilibrium phenomena that reflect a change in the underlying fundamentals in response to a foreign exchange windfall shock. Observed in this light, Dutch Disease is not a disease at all: real exchange rate appreciation, changing patterns of demand generated by spending effects, and resource reallocation are all just natural consequences of a comparative advantage shift in resource specialization and accompanying foreign exchange inflows that do not represent a misalignment (in the real exchange rate) or an anomaly in need of policy intervention. Only in the event that Dutch Disease effects overshoot, as a result, say, of adjustment problems, or miscalculation by economic agents, or on account of poor domestic economic management, would policy intervention be required. For example, domestic economic agents might assume that a temporary resource boom is permanent, causing the real exchange rate to overshoot its Dutch Disease-related level and become overvalued, and eventually unsustainable. In this case, policy intervention would be required to correct the misalignment.

Thinking about Dutch Disease as an equilibrium phenomena is helpful in understanding the nature of the problem, but it is too simplistic to be a practical guide to policy. Policymakers will find it difficult to tell when a boom is temporary or permanent, or to know when the real exchange rate or other variables are overshooting the new post-boom equilibrium. Moreover, in most low-income countries there are many obstacles to adjustment, as noted above, and these countries will find it difficult to absorb large and persistent windfalls. Overshooting in these circumstances will be a standard condition. Policy responses to the resource boom are thus likely to play an important role in determining the overall impact of the shock. The central challenge then will be how to adequately manage the foreign exchange windfall, not whether to manage it. More on policy options in the final section of this study.

INSTITUTIONS

Quality of institutions – rule of law, strength of property rights, quality of political institutions, and so on – has been found to be a key factor (some would say the key factor) in determining which countries will grow and prosper and which countries will not (Barro 1995; North 1994 Rodrik, Subramanian, and Trebbi 2003). The contention is that weak institutions can lead to unstable government and civil conflict, expropriation of investments, inequality, and inadequate controls on corruption and rent-seeking, all of which worsen the investment climate and reduce growth⁶. The important point for our analysis is that natural resource dependence has been found to have a significant influence on the nature and quality of a country's institutions, and this impact has been hypothesized as one of the main channels through which natural resources curse growth and long-run development. Sala-i-Martin and Subramanian (2003) demonstrate in a cross-country study that resource specialization has a detrimental effect on institutional quality, which, in turn, negatively impacts economic growth. The adverse effect of resource dependence on institutional quality and growth is found in just about all the research to be especially strong for oil, diamond, and mineral production, which have concentrated production and revenues (Auty 1997; Isham et. al. 2003). In addition, there is evidence that resource dependence weakens institutions, which then cause a decline in human welfare, as measured by indicators, such as the human development index, nutrition levels, and life expectancy (Bulte et. al. 2005).

⁵ Genuine saving = public saving + private saving at home and abroad – depreciation + current spending on education – depletion of natural resources – damage of stock of pollutants.

⁶ It should be noted that causation does not run just in one direction. Institutional quality is also found to be a function of growth. Many institutions evolve in response to the level of income, such as financial market organization and instruments, social safety nets, tax systems, and patent systems, intellectual property rules, and perhaps the biggest institution of all, democracy.

An especially important research finding for developing countries indicates that countries already endowed with good institutions at the time of natural resource discoveries are much more likely to put their foreign exchange windfall to use for the whole country's benefit rather than the welfare of a select, well-connected elite (Robinson, Torvik and Verdier 2006; McSherry 2006; Smith 2007; Collier and Goderis 2007; and Boschini, Petterson and Roine 2007). Thus countries with strong institutions can avoid the resource curse and turn it into a blessing. Conversely, resource-rich countries with weak institutions, which are typically low-income and underdeveloped, have tended to stay that way. Central reasons for this may be a combination of the following:

- The effects of resource windfalls on macroeconomic stability and on economic growth are moderated by the quality of institutions (Arezki, Hamilton and Kazimov 2011);
- Countries where physical command of mineral deposits by the government or a hereditary elite automatically confers wealth on those in control may be less likely to develop quality institutions, such as rule of law and decentralization of decision-making, that are conducive to economic development, as compared to countries where moderate taxation of a thriving market economy is the only way the government can finance itself (Frankel 2010);
- Booming resource revenues may worsen governance which manifests itself in corruption and policy mismanagement that undermines growth (Collier 2007);
- Entrepreneurs may be encouraged, given increasing government revenues, to shift from profit-seeking towards socially inefficient rent-seeking for government contracts rather than spending their time innovating and trying to become more efficient and competitive (Paldam 1997; Ploeg 2010).

2. MOZAMBIQUE'S VULNERABILITIES TO POTENTIAL ADVERSE EFFECTS OF THE COMING RESOURCE BOOM

Now that we have some background on the potential adverse effects of resource booms in low-income economies, we can move to take a closer look at the specific issues Mozambique will have to deal with given projections for natural resource exports in the next decade. We begin with an overview of the extent of the coming resource boom in the next section. Following this, we examine Mozambique's possible vulnerabilities to adverse spillovers. In the final section, we look at policies for managing the coming resource windfall. It is not inevitable that resource-rich countries are doomed to experience all the adverse effects of these events. The important question is what policies can be employed to increase the chances of successfully managing the boom.

2.1 EXPECTATIONS REGARDING THE EXTENT OF THE COMING RESOURCE BOOM

Mozambique is set to realize windfall export revenues over the next decade in coal, natural gas (including possibly some oil), and mineral sands. Other mineral export possibilities which have been highlighted are gold, bauxite, beryllium, tantalite, copper, lead, and uranium. In addition, exports of electricity to neighboring countries are predicted to grow substantially with increased investments in hydro and new ventures in coal and natural gas-fired power plants. Downstream, the coming export boom is also stimulating plans for related investments in steel production and ores smelting, as well as essential developments in infrastructure in railways, water barges, roads, ports, and dams. According to David Smith in The Guardian newspaper, this looks a lot like "boom time for Mozambique, once the basket case of Africa⁷."

Listed below in Table 1 are Mozambique's current mega-projects, in operation or in construction (we also include the CESUL electricity transmission project and Benga power project, as these are large continuing investments), together with Mega projects under consideration for future development. Mozal, an aluminum smelter which has been operating for more than a decade, was Mozambique's first mega-project.

⁷ The Guardian newspaper Wednesday 28, March 2012

TABLE 1. MOZAMBIQUE'S MEGA PROJECTS

Company/Project	Sector	Location	Investment	Capacity/Reserves	Production
Mozal Mozal II Mozal III	Aluminum	Maputo	2.1 billion dollars	245,000 tons per year 245,000 tons per year	2000 2003
Hidroelectrica – Cahora Bassa Dam	Electricity	Cahora Bassa CB-North	(n.a.) 800 million dollars	HCB 2075 MW CEZA/HCB 1245 MW	1998 Start up 2011 Completion 2017
CESUL Transmission Project	Electricity	Tete connected with southern provinces	2.5 billion dollars	Phase I 3100 MW anchored to Cahora Bassa and Mphanda Nakuwa Dams Phase II 6000 MW anchored to coal-fired power plants Vale/Rio Tinto	Start date 2011 completion expected 2016 (Phase 2 depends on Vale/Rio Tinto power plant investment)
Benga Power Project	Electricity	Benga coal deposit, Tete	1.3 billion dollars	Phase I 600 MW Phase II 2000 MW	2013
Sasol/ENH 50% Expansion	Natural Gas	Pande, Temane gas fields, Inhambane	2.1 billion dollars	154 GJ 231 GJ	2004 2011-16
Kenmare	Heavy Sands	Moma, Nampula	460 million dollars	900,000 to 1.3 million tons per year ramp up to	2007
Vale	Coal (thermal and coking) + coal terminal and railway	Moatize, Tete	2.0 billion dollars so far; Expansion plans next 4 years 4 billion dollars.	25 million tons per year total capacity (0.6 million tons shipped 2011, aim to increase capacity to 22 million tons by 2014)	2011
Rio Tinto/Riverdale	Coal (thermal and coking)	Benga, Tete	1.0 billion dollars	Total capacity, Benga 10 million tons Adjacent Zambezi 25 m Tete East 10 m	2012

FUTURE PROJECTS UNDER CONSIDERATION

Mphanda Nkuwa	Electricity	Zambezi River, Tete	2.9 billion dollars	Phase I 1500 MW Phase II 2500 MW	2012-15 2017
Anadarko ENI Statoil Petronas	Natural Gas + LNG plant	Rovuma Basin	15 - 20 billion dollars	Exploration, planned LNG plant 2 trains. Between Anadarko and ENI 57-70 TCF of gas discovered offshore.	First gas 2018
JSPL	Coal + 2640 MW coal-fired power plant	Changara, Tete	(n.a.)	10 million tons per year	2012-16 ramp up
Corridor Sands	Heavy Sands	Chibuto, Gaza Province	1 - 2 billion dollars	Looking for new investor, requires investment in electricity (Mphanda Nkuwa)	(n.a.)

It continues to be the leading mega exporter in the country, contributing more than half of total export revenues. Mozal currently produces at capacity and has averaged about 1.2 billion dollars in international sales annually over the last decade. The smelter initiated a phase II expansion of production in 2003 of 245,000 tons per year. Plans for a phase III expansion, according to the company, are contingent on future world market demand and aluminum prices.

Electricity mega-projects are the second largest exporter today. The Cahora Bassa Dam (HCB) is the biggest hydroelectric scheme in Southern Africa. Its powerhouse has five 415 MW turbines giving it 2075 MW of installed capacity. Roughly 80 percent of its output is exported to neighboring countries – Mozambique consumes only 19 percent of total output, while South Africa consumes 73 percent. HCB continues to make investments to increase output and future exports. In 2010, a 10.5 million dollar investment was completed, raising output by 14 percent, and a planned 800 million dollar expansion at HCB's North Bank Power Station is scheduled to increase capacity another 1245 MW. Two other electricity generating projects are projected to add significant capacity in the future: the Benga power project and the Mphanda Nkuwa Dam. In 2010, the Government of Mozambique approved the 1.3 billion dollar Benga Power Project located on the Benga coal deposit in Tete where direct access to required thermal coal supplies are located. Phase I production of 600 MW is scheduled for 2013. Final capacity when phase II is completed will be 2000 MW. Output of phase I will be transmitted by EDM and approximately 63 percent is slated to be sold to Rio Tinto mines and other consumers in Mozambique and what remains to South Africa.

The Mphanda Nkuwa Dam on the Zambezi river in the western province of Tete (60 km downstream from the Cahora Bassa Dam) would add 1500 MW of capacity in phase I and 2500 MW in phase II. It was originally scheduled for construction in 2010 and completion in 2013, but delays have disrupted this timetable. An environmental impact assessment was completed in 2011 stating that the dam posed no significant threat to the environment. A consortium of a Brazilian construction firm, Camargo Correa (40 percent ownership), Energia Capital (40 percent), and EDM (20 percent) is now seeking final funding of 2.9 billion dollars for the project. The dam plans to sell its electricity to other SADC countries.

The CESUL Power Project plans to tie all these electricity generation projects together with a transmission line connecting Tete province with the central and southern provinces of the country. The project scheduled for completion in 2016 and will cost 2.5 billion dollars. EDM is funding 51 percent of the project and donors will fund the other half. The transmission line will transport 9000 MW of power generated at the dams. Phase I, which aims to increase transfer capacity by 3,100 MW, will connect the north and south transfer to provide reliable and low-cost electricity to a series of urban centers. It will be anchored to the Cahora Bassa hydropower station 2075 MW and the 1500 MW Mphanda Nkuwa hydroelectric dam. Phase II, which aims to raise transfer capacity by 6000 MW, is less certain, as its completion depends on coal-fired plants to be developed by Vale and Rio Tinto using their discarded low-quality thermal coal.

While aluminum and electricity provided a substantial shot in the arm to trade during the last decade, it is the coming bonanza in coal and natural gas that will catapult exports to a new and much higher growth trajectory in the next decade and beyond. Beginning with coal, the Moatize coal basin in Tete province is said to represent the world's largest untapped coal reserve with an estimated 6 billion tons. Moatize also contains possibly the last big coking coal mine in the world. Putting Moatize together with the other coal discoveries in the Moatize basin of the Zambezi Valley – Zambezi, Benga, Cahora Bassa, Ncondezi, Minas Moatize, Karoo, and Revuboé – total coal reserves in Mozambique are estimated to be approximately 25 billion tons. A report by Standard Bank⁸ estimates the in-situ value of these reserves, assuming long-term average world prices of 150 dollars per ton for coking coal and 80 dollars per ton for thermal coal, to be as much as 1 trillion dollars.

⁸ Rajat Kohli (2012) "Tete Basin Coal: A Key Driver for Mozambique" Standard Bank, Maputo, Mozambique.

World market demand for coal has been strong and is expected to remain so for the foreseeable future, notwithstanding a recent slowdown in economic growth in China and Europe, which has temporarily depressed commodity markets. Thermal coal demand continues to be propelled by overall growth in emerging markets.

Coking coal demand, on the other hand, continues to be driven by large investments in infrastructure in India, China, Brazil and the Middle East, which has raised the demand for steel production around the world. World coking coal demand is predicted to grow by 70 to 80 percent over the next 15 years. Mozambique is in a good strategic location to serve these markets.

Realizing the production and export potential of Mozambique's vast, unexploited coal reserves in the future will not be easy given the country's infrastructure challenges. Most important are the constraints presented by rail and port facilities, which limit the speed of development of coal deposits and put an overall ceiling on exports in the near term. The shortest route to market from the Moatize Basin in Tete is the 580 km Sena rail line to the port of Beira. The capacity of this rebuilt rail line, however, is only 6 million tons per annum and Beira port's old coal terminal can handle only 1.2 million tons at present. In addition, Beira has a shallow port and, even after completed dredging, only smaller Handymax vessels with a coal carrying capacity of 60,000 dwt are permitted to use the facilities.

To deal with these problems plans exist to upgrade ports and build a new rail line. Vale is investing 2.0 billion dollars to build a new 200 km rail link from Moatize that would connect with the existing Malawi-Nacala line running through Malawi to the port of Nacala on the northern coast of Mozambique. The Malawi-Nacala line would also be upgraded to give the whole 800 km system a capacity to carry as much as 20 million tons of coal per year. Nacala port is the most feasible long-term solution for the country's coal exports in that it is a deep water port with the capability to handle ships of any size. At Nacala a new coal terminal is planned raising existing capacity from 1.5 million tons to around 16 million tons. To add additional capacity to transport coal to Beira, small and medium scale barging down the Zambezi 550 km to Chinde is being proposed, although the depth of the river and seasonality problems with flooding and drought may hamper this alternative to some degree. In addition, the Government of Mozambique, with support from Vale and Rio Tinto, has plans to build a new coal terminal at Beira to raise coal handling capacity to 18-22 million tons. All these investments to increase transport capacity and improve port handling capacity will be needed to fully exploit Mozambique's coal resources and they will all take some time to complete.

Discoveries by Anadarko and ENI in the Rovuma Basin place Mozambique in the top tier of countries in the world with large natural gas reserves. Based on existing discoveries, Mozambique has proven and probable reserves of between 1.6 and 1.98 trillion cubic meters of gas respectively. Seismic analysis of the current discovery areas suggests that there could be more than 3.4 trillion cubic meters of possible reserves. Analysts estimate that natural gas could bring Mozambique revenues of as much as 400-500 billion dollars over the next several decades.



The Cahora Bassa is situated on the Zambezi River in Tete province, Mozambique.

Mozambique is geographically well situated to serve growing markets in Asia looking for supplies of liquefied natural gas. However a great deal of investment will be required to exploit this export opportunity. Phase 1 of the LNG (Liquefied Natural Gas) plant investment planned by Anadarko and ENI, which involves two 5 Mtpa (Metric tons per annum) trains, requires funding of 20 billion dollars. Significant local capital expenditure ancillary to this LNG complex would also be needed to support this investment, such as port facilities, petroleum storage, electricity generation, water, health and other social facilities, and airport development. Putting together the necessary funding for a project this large, including the outlay for ancillary local infrastructure, will be challenging in today's global financial markets. However, other big oil and gas companies are reported to be already looking to take a stake in Mozambique's discoveries and sovereign wealth funds and private equity firms have shown increased interest in funding such projects around Africa.

2.2. THE IMPACT OF MEGA PROJECTS ON THE ECONOMY: PAST AND FUTURE

Several studies have examined the impact of mega projects on the economy (Andersson 2001; Castel-Branco 2003; Sonne-Schmidt, Arndt, and Magaua 2009; IMF Country Report 2011). The focus of these efforts has been on estimating the contribution of mega projects to value added (measured at factor cost) and the rate of growth of value added, as well as on the broader benefits to living standards in Mozambique. The general conclusion of these investigations is that mega projects have made a substantial contribution to GDP over the decade, however, to date the impact of these projects on living standards has been restrained (a) because they are foreign-owned investments that repatriate a large portion of their profits, (b) because the nature of their contracts gives them significant reductions in income and commodity taxes, and allows them to deduct expenditures on infrastructure and employee training from taxes owed (c) because they are capital intensive operations and therefore do not employ many workers, and finally (d) because they rely heavily on imported intermediate inputs and thus have limited linkages with the rest of the economy.

Estimates of the contribution to GDP vary somewhat. Sonne-Schmidt, Arndt, and Magaua analyzed the contribution of the first three mega projects in Mozambique – Mozal (aluminum), Sasol (natural gas), and Moma (heavy sands) – over the period 1996-2006. They found that in the year 2006, these projects, as a group, accounted for approximately ten percent of value added. And the direct contribution of these projects to GDP growth (if one includes the contribution of the construction phase of these projects) was estimated to be 1.1 percentage points per year over the ten year period, with the rest of the economy growing at 7.6 percent per annum. So, mega projects were not found to be the main source of economic growth over these years (although they did make a significant contribution), and the rest of the economy was not stagnant, as is often presumed. The IMF study estimates put the contribution to growth a bit higher. During the period 2003-10, the IMF finds that megaprojects contributed up to 4 percentage points to GDP growth (and 10 to 13 percent of value added depending on the year). However, the IMF points out that mega project output is limited by capacity constraints; hence, there are certain dynamics to the role they play in macroeconomic aggregates. When they start operating and up until they reach full capacity, mega projects boost growth. But, once a project reaches full capacity and its output ceases to grow, its contribution to the rate of GDP growth disappears and its share in value-added tends to decline somewhat over time as other activities with positive growth rates overtake it. As a consequence, the ability of mega projects to be a continuous engine of growth depends on the initiation of new projects and on the expansion of their capacity.

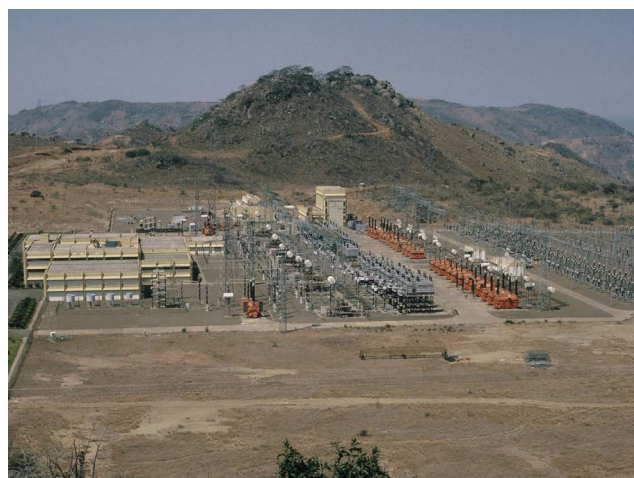
The effects of mega projects on living standards were found to be very modest. These projects, overall, have created few jobs. And linkages to the public budget via tax revenues have also been small because of tax exemptions. Thus, viewing mega investments only in the light of export volumes leaves an overly optimistic picture of their impact on the economy. They may account for the largest share of exports, but (given the terms of negotiated contracts) they also account for a large share of imports, pay low taxes, and repatriate a large share of their profits, reducing their potential impact on the economy. However, it should be noted, that this assessment of the broader impact of mega projects does not include the benefits of the infrastructure these companies have built, the training of employees they have carried out, and the improvements to the investment climate they have generated by their successful operation, all of which are meaningful contributions to economic development.

What about the future impact of mega projects? Expanded estimates of coal reserves and new discoveries of natural gas, described above, will be coming on stream over the next decade, and government officials state that the contract terms for these new investments will exclude many of the generous tax breaks and concessions of the past. In addition, there will be huge investments in infrastructure to support these projects. To explore future impacts on the economy, it is helpful to begin with the results of two studies that make forecasts. The first study is by Bucuane and Mulder (2007), which is based on known information about mega investments and resource reserves in 2006. Bucuane and Mulder estimate the future impact of mega projects on the balance of payments.

They calculate the direct trade balance effect (exports – imports) minus debt service and repatriation of profits of these projects, and then project these estimates to the year 2020. According to their computations, mega projects will have a positive effect on the balance of payments each year after 2006 and, by the year 2020, will reach 1.3 billion dollars (this is considerably less than the effect on the balance of trade in 2020, which is projected to be 3.4 billion dollars, because of leakages due to debt service and profit remittances). Assuming a constant growth rate of GDP of 7.5 percent for the period, they estimate that the effect on the balance of payments will equal 7 to 8 percent of GDP in 2020, peaking at 13 percent in 2012. State fiscal revenues from these mega projects are projected to rise to around 250 million dollars in 2020, equal to about 7 percent of estimated total fiscal and other internal revenues. They caution that these numbers may increase considerably if revenues from new projects, such as oil, should come on stream. But they remind the reader that aid flows over the decade have been considerable, equaling 20 percent of GDP in 2005, and these capital flows did not cause Dutch Disease. Hence, their analysis concludes that these numbers are not cause for great concern, but they warn that prudent spending of natural resource revenues remains a prerequisite for avoiding a resource curse.

However the situation changed considerably after 2006. The second study of future mega projects impacts takes these changes into consideration. An IMF (Country Report 2011) study projected impacts including the new information about Mozambique’s huge coal reserves, which were ramped up substantially at the end of the decade, and an expansion in Sasol capacity. Accordingly, IMF estimates include an expansion in mega project production that incorporates a 50 percent linear rise in Sasol’s capacity by 2016 and the start of coal production by Vale (total capacity 25 million tons) in 2011 and Rio-Tinto (total capacity 45 million tons) in 2012, each reaching projected full capacity by 2016 and 2020, respectively. Assuming that coal infrastructure developments (largely railroad expansions) proceed according to plan, growth in the coal industry is estimated boost the share of the mega projects to up to 18 percent of the value added by 2016. And the direct contribution to GDP growth is estimated to be between 2 to 4 percentage points annually. These estimates ramp up the projections of Bucuane and Mulder almost three-fold. But they still appear to be within the manageable range of 20 percent of GDP where aid flows were in 2006⁹.

However, there is now the added impact of discoveries of gas (and possibly oil) by Anadarko and ENI. Some estimates have put the value of new gas discoveries at as much as 400 billion dollars over the next four decades. If we accept this approximation, Mozambique could conceivably realize exports of gas somewhere near 10 billion dollars per annum in coming years. Assuming that 50 percent of this windfall is captured by foreign exploration companies, this leaves export revenues of roughly 5 billion dollars per year for Mozambique, which could mean another increase of 20 percent in GDP around the year 2020 (assuming GDP equals IMF projections of around 25 to 30 billion dollars in that year). Even if we conservatively cut this estimate in half, gas exports would be enough to push the impact of mega projects into a range where the country will have difficulties avoiding adverse effects of the windfall (especially considering that we have not added in the impact of all the inflows of investment capital to get coal and gas projects going and related activities). In the end, however, much depends on the ultimate size of the windfall, on how it is spent, on the volatility of commodity prices and how sensitive the exchange rate is to these shocks, and on the absorptive capacity of the economy. We turn to a discussion of these issues in the next section.



Featured projects to the central Cahora Bassa North (1245MW), Mpanda Nkuwa (phase I and phase II 900MW 1500MW), Borama (200MW), Lupata (600MW) and Lurio (120MW)

⁹ Mega project contribution to employment, which was around 3800 in 2010, compared to a total employment of 10.2 million, is projected to increase to 7000 once the coal mines reach capacity by 2016, bringing the share of mega projects in total employment to just 0.01 percent.

2.3. POTENTIAL BOOM-RELATED VULNERABILITIES

VOLATILITY

Volatility is at the core of potential negative spillover effects of a resource boom, particularly in economies that lack diversification and have embryonic financial markets. The central cause of this volatility, and the boom and bust cycles that often develop, is the volatility of world market commodity prices.

Mozambique is a prime example of the types of economies that can experience adverse effects from commodity price shocks. The economy is small and production and exports are heavily concentrated in primary commodities. The financial sector is underdeveloped and there are few instruments available for hedging. Monetary and fiscal policy, as well as international capital flows, are likely to be pro-cyclical (based on experiences of other low-income countries), amplifying commodity price swings. Data show that Mozambique currently experiences a good deal of volatility in key economic indicators. A case in point is the exchange rate. A striking feature of metical exchange rate movements since it began floating in the mid-1990s has been persistent volatility. Figure 2 and Table 2 present a picture of Mozambique's real exchange rate volatility, employing the most widely used measure for calculating exchange rate fluctuations – the standard deviation of the first difference of logarithms of the exchange rate (taken from Biggs 2011). The change in the exchange rate is computed over one month, using end-of-month data. The standard deviation is then averaged over one year, as an indicator of short-run volatility, which is plotted in Figure 2 and shown in the first half of Table 2. Volatility is also averaged over a three-year period to capture longer-run volatility, which is shown in the second half of Table 2. All the volatility estimates are for the real effective exchange rate for the period 2000-11.

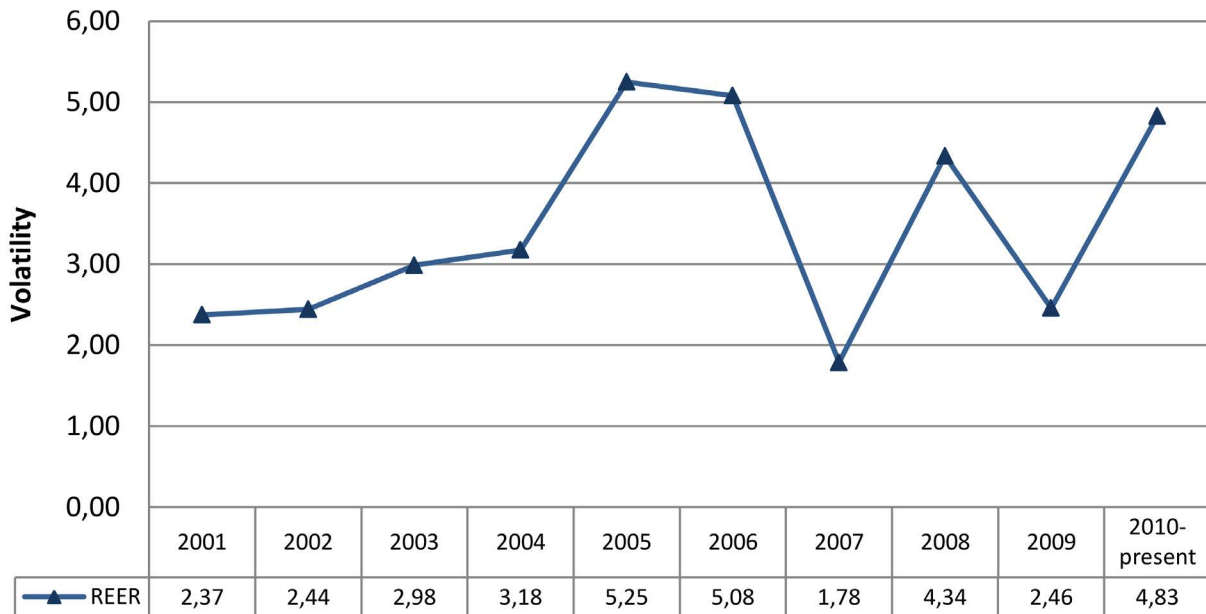
Average real exchange rate volatility is high in Mozambique. The long-run average standard deviation for the whole period is 3.9. In addition, volatility appears to have risen over the decade – increasing 40 percent, from an average volatility of 2.6 in the first half of the decade to 3.7 in the second half. To put these estimates in perspective, Mozambique's exchange rate volatility is almost twice as high as that found in advanced countries, where volatility averages between 2 and 2.5. Low average exchange rate volatility is expected in advanced countries, as they adjust more smoothly to shocks, given their more diversified economies, and currencies trade in large and liquid markets, with many instruments available to hedge volatility, helping these markets to clear quickly and reducing potentially large movements in exchange rates. When benchmarked against exchange rate volatility in other developing countries, Mozambique compares more favorably, although it is still on the high side. Developing countries as a group tend to have roughly twice the average volatility of advanced economies. Mozambique appears to fit most naturally with a group of developing countries classified as non-fuel primary exporters, which exhibit the highest levels of average real exchange rate volatility across the world. In this developing country cohort, Mozambique's average exchange rate volatility ranks about in the middle. As a rule, these countries are small and subject to more frequent terms



Project basis from the regional airport of Nacala - Mozambique - 2011

of trade shocks, owing to volatility in global commodity markets.

FIGURE 2: VOLATILITY OF REAL EFFECTIVE EXCHANGE RATE



Source: Biggs 2011.

TABLE 2: VOLATILITY OF REAL EFFECTIVE EXCHANGE RATE

Year	Real Effective Exchange Rate
2001	2.37
2002	2.44
2003	2.98
2004	3.18
2005	5.25
2006	5.08
2007	1.78
2008	4.34
2009	2.46
2010-present	4.83

Period	Real Effective Exchange Rate
2001-2003	2.55
2004-2006	4.65
2007-2009	3.65
2010-Present	4.83

Source: Biggs 2011

What is important about high exchange rate volatility is that it can increase deadweight costs in the economy and harm investment, innovation, and productivity growth. Above all, however, it has negative effects on tradables. Risk-averse exporters in Mozambique are adversely impacted by volatility, particularly in the absence of low-cost hedging mechanisms. Where volatility has its greatest effect is on the composition of trade – even when aggregate trade flows remain relatively stable, or decline only slightly, high exchange rate volatility can cause meaningful changes in the export basket. Raddatz (2011) found that exchange rate volatility matters relatively more for products that lack a “natural hedge” and are therefore more exposed to volatility. A natural hedge against exchange rate volatility, which is provided by a negative correlation between a product’s international price and the country’s nominal exchange rate, is shown to influence a country’s export patterns, even after controlling for other standard determinants of export composition, such as factor content of trade and export patterns of countries with similar levels of income. The reason for this outcome is that products and sectors with international prices that are negatively correlated with the country’s exchange rate have relatively more stable prices in local currency than do other products and sectors. Given that fluctuations in local currency prices matter for incentives for trade and resource allocation, especially in countries like Mozambique with less developed financial markets unable to hedge and bear elevated risk, these goods become relatively more important in the country’s export basket following sustained periods of exchange rate volatility.

Risks of volatility-related effects are apt to increase as Mozambique’s export basket shifts from aluminum towards coal and natural gas. As Figure 3 and Table 3 indicate, during the last decade coal and natural gas prices have been much more volatile than aluminum prices – gas by a factor of 2 and coal by a factor of more than 3. Coal price volatility over the decade even eclipsed high volatility oil prices, with an average standard deviation for the 2000-12 period of .59 as against oil’s standard deviation of .30. This represents a dramatic increase in the volatility of coal prices compared with the past. Over the past 50 years up to the early 2000s, coal had an average standard deviation of annual world price fluctuations of just .11, while oil averaged 0.36.

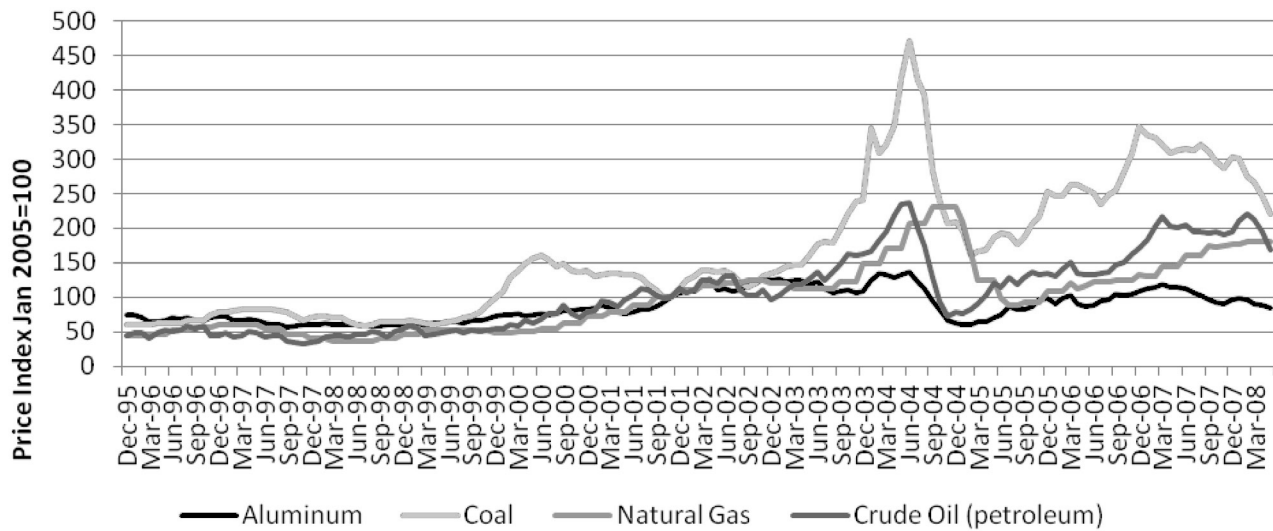
To some degree the effects of increased price volatility on the economy will be mitigated by price-sticky contracts of producing companies. For example, current electricity export contracts are long-term and generally do not permit large price fluctuations and Mozal operates on the basis of term contracts (although shorter in duration than electricity) with standard escalation clauses. Coal and gas companies conduct business in a similar manner. Perhaps more important for mitigating the effects of volatility will be various microeconomic government policies to minimize exposure to the risk of short-term volatility, such as hedging in futures markets and indexing contracts with extraction companies, as well as macroeconomic management of monetary and fiscal policy to avoid pro-cyclicality. There will be several types of volatility policymakers will have to manage – the short-term volatility just discussed, medium-term swings of the sort associated with Dutch Disease, and the more predictable volatility due to geology and depletion of resources over time. We will discuss these policy issues in greater detail in the last section.



IMF headquarters in Washington, DC

FIGURE 3: COMMODITY PRICE VOLATILITY

Commodity Prices: Monthly Averages 2000-2012



Source: IMF External Data- Primary Commodity Prices as produced by The Commodities Team of the Research Department.

TABLE 3: COMMODITY PRICE MEANS AND STANDARD DEVIATIONS 2000-2012

Period	Mean				Standard Deviation of Indexed Prices			
	Aluminum	Coal	Natural Gas	Crude Oil (petroleum)	Aluminum	Coal	Natural Gas	Crude Oil (petroleum)
Jan. 2000- Dec. 2004	66.65	83.16	49.53	51.05	6.49	29.66	7.50	10.72
Jan. 2005- Dec. 2008	107.64	189.35	127.18	127.84	18.21	94.96	41.61	39.42
Jan. 2009- Jun. 2012	92.44	256.51	139.18	155.72	15.38	52.49	33.85	40.71

Source: IMF External Data- Primary Commodity Prices as produced by The Commodities Team of the Research Department.

SENSITIVITY OF THE REAL EXCHANGE RATE TO COMMODITY PRICES AND CAPITAL FLOWS

A key element of the adverse effects of a foreign exchange windfall is real appreciation of the exchange rate, as we detailed in our earlier discussion of Dutch Disease. Hence, in order to understand how Mozambique's coming resource boom might impact the economy, it is important to examine the reaction of the metical to the types of shocks a foreign exchange windfall will generate. Typical boom-related shocks can originate from commodity price spikes and rising export quantities, as well as escalating capital inflows, generated by international investment in new discoveries.

How sensitive is the metical to such shocks? Is the metical a "commodity currency" similar to the floating currencies of some other commodity exporters, such as Australia and New Zealand? That is, is the metical a currency that appreciates when prices of the commodities Mozambique produces are strong on world markets and depreciates when they are weak, such that commodity price shocks explain a significant portion of exchange rate movements? Also, how responsive is the metical to demand-side shocks and supply-side shocks, such as international transfer payments and productivity differentials? Can movements in the metical be explained by international capital flows – foreign direct investment, aid flows, and other transfers, which increase the net foreign asset position of the country – or do productivity differentials with Mozambique's trading partners play a large role in determining long-run exchange rates? Lastly, has there been an element of momentum to some recent exchange rate movements, or can they be explained by economic fundamentals?

To answer these questions, we developed a model of real exchange rate determination following Frankel (2007). Our model concentrates exclusively on determinants of long-run equilibrium, leaving aside short-run deviations of the current real exchange rate from this long-run equilibrium. Short-run deviations are generally the result of financial flows in response to interest rate differentials and shifting bond market risk-premiums. As Hassan and Simione (2010) argue in their study of the exchange rate in Mozambique, however, such financial aspects of exchange rate determination are much less relevant for low-income countries with embryonic financial markets. In economies like Mozambique's, trade in goods is the primary driver of exchange rates rather than financial market speculation or hedging; and the central bank actively influences monetary variables. Hence, the Purchasing Power Parity (PPP) model of long-run exchange rate determination, with its roots in goods markets, represents an adequate model for our purposes in this case.

The long run equilibrium real exchange rate is given by a version of PPP:

$$RER = \frac{EP^*}{p}, \text{ or in log form: } rer = e + p^* - p, \text{ (1)}$$

where e = log of the nominal exchange rate, in meticaïs per dollar;

p = log of the Mozambican price level (M-CPI);

p^* = log of the foreign price level (F-CPI).

Price indices at home and abroad are defined as Cobb Douglas functions of traded goods TG and non-traded goods NTG: $p = \alpha p_{NTGM} + (1-\alpha) p_{TGM}$, (2)

$$p = \alpha p_{NTGM} + (1-\alpha) p_{TGM}, \text{ (2)}$$

where α is the weight placed on non-traded Goods in the Mozambican basket.

The same weights are assumed in the foreign country for simplicity.

$$p^* = \alpha p_{NTGF} + (1-\alpha) p_{TGF}. \text{ (3)}$$

Combining (1), (2) and (3),

$$\begin{aligned} rer &= e + p^* - p = e + [\alpha p_{NTGF} + (1-\alpha) p_{TGF}] - [\alpha p_{NTGM} + (1-\alpha) p_{TGM}] \\ &= (e + p_{TGF} - p_{TGM}) + \alpha [(p_{NTGF} - p_{TGF}) - (p_{NTGM} - p_{TGM})] \text{ (4)} \end{aligned}$$

The first term in equation (4) can be understood as the terms of trade, the relative price of traded goods produced in the foreign basket in terms of traded goods produced at home. To examine the question of whether the metical is a commodity currency, we proxy the terms of trade for Mozambique by using the exogenous commodity terms of trade, which is the real price of Mozambique's largest commodity export, aluminum, (ral), in log form. For commodity-exporting economies, where commodities constitute a significant share of exports, the world price of commodities has been found to have a strong effect on real exchange rates (Chen and Rogoff 2003; Cashin et.al. 2004; Isard 2007; Ricci et. al. 2008). Cashin et. al. included Mozambique as one of the 58 countries in their study, which examined data for the period 1980-2002. They concluded that the metical did not follow the pattern of a commodity currency during these years, as the prices of Mozambique's key commodity exports at the time (cotton, sugar and maize) were not significantly correlated with real exchange rate movements. However, as we will discuss in greater detail below, the composition of Mozambique's exports has changed dramatically since the early 2000s, when the exports from mega projects became increasingly important. This raises the crucial question of whether determinants of the real exchange rate have changed and, if so, what this change may portend for the effects of a future resource boom. In addition, if we find a robust connection between commodity export prices and exchange rates, the finding would have important implications across a variety of policy issues, not least concerning questions such as Mozambique's competitiveness and how to implement inflation targeting. The second term in equation (4) is the relative price of non-traded goods in terms of traded goods, foreign versus Mozambique, with weight α . Real appreciation occurs when the relative price of non-traded goods rises more rapidly in Mozambique than in its foreign trading partners. This can arise in two instances that we examine in our study: (1) in the case of supply-side shocks, such as the so-called Balassa-Samuelson relationship, when the rate of growth in productivity (measured by income per capita) is higher in Mozambique than in foreign trading partner countries and (2) in the case of demand-side shocks, such as international transfer payments, when there are international capital inflows in the form of foreign direct investment, or foreign aid, or other types of wealth transfers. In both of these situations, because prices of tradable goods are tied to world prices by the Law of One Price, shocks due to rising productivity growth rates (generally concentrated in the traded goods sector) or shocks due to the transfer effect¹⁰ will tend to push up prices in the non-traded goods sector (via a labor supply adjustment) and cause real exchange rate appreciation.

Therefore, in the Balassa-Samuelson case: $(p_{NTGF} - p_{TGF}) = \beta(\text{income per cap}) F$ and $(p_{NTGM} - p_{TGM}) = \beta(\text{income per cap}) M$.

And in the case of transfer effects: $(p_{NTGM} - p_{TGM}) = \gamma(\text{net foreign assets}) M$

Thus our regression model of long-run real exchange rate determination will investigate the impact of three variables on long-run equilibrium: commodity terms of trade (real price of aluminum), Balassa-Samuelson effect (relative income per capita), and transfer effects (net foreign assets), as presented in equations (5), (6) and (7) below.

$$rer_t = \mu ral_t + t \quad (5)$$

$$rer_t = \mu ral_t + \alpha \beta [(income\ per\ cap) F - (income\ per\ cap) M]_t + t \quad (6)$$

$$rer_t = \mu ral_t + \alpha \beta [(income\ per\ cap) F - (income\ per\ cap) M]_t + \gamma (NFA)_t + t \quad (7)$$

What is important here is that these variables are hypothesized to have persistent effects on the long-run PPP equilibrium real exchange rate. Thus, rather than moving back to PPP equilibrium reasonably quickly, the conjecture is that these real economic variables cause persistent deviations from equilibrium that can have important economic implications. As we pointed out in our discussion of Dutch Disease, such persistent deviations from equilibrium, which can occur in a resource export windfall, are not necessarily considered a misalignment of the exchange rate, rather these deviations can be thought of as fundamental changes that shift the economy to a new, comparative advantage-based equilibrium.

However, while it may not be considered a misalignment, there certainly can be economic consequences resulting from this new equilibrium, in terms of economic growth and winners and losers in income distribution.

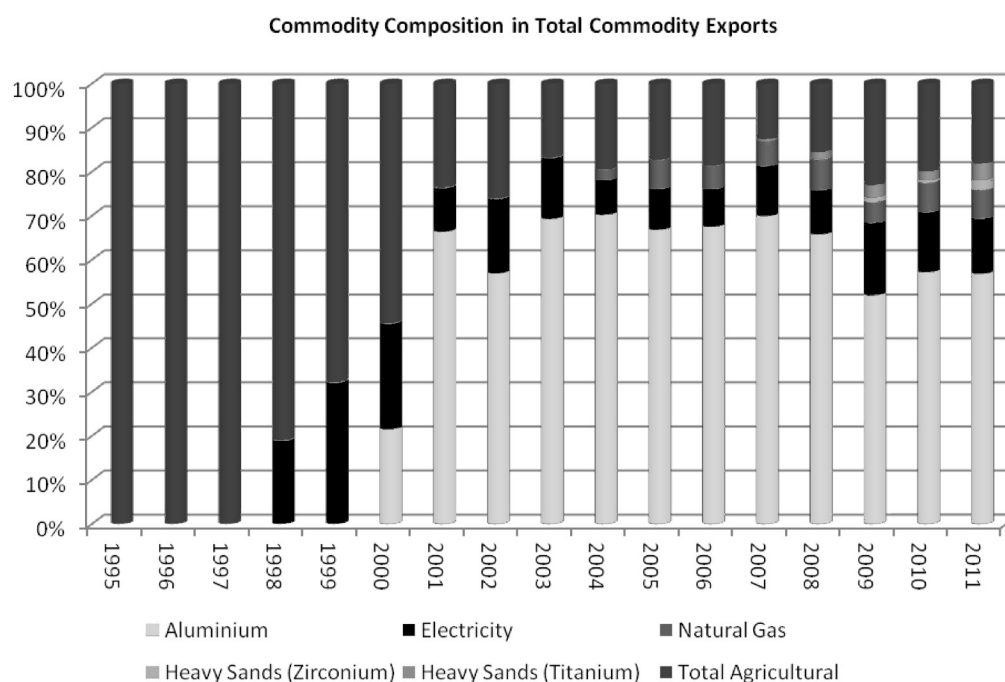
¹⁰ According to Obstfeld and Rogoff (1996), a "transfer effect" occurs when a transfer of wealth from the foreign to the home country raises spending on home non-tradables: home wages rise, the home export sector declines due to reduced profitability, and the foreign export sector expands. The home terms of trade improve, and the home real exchange rate appreciates. The latter is due to an increase in the price of non-tradables, due to higher wages.

A GRAPHICAL EXAMINATION OF THE DATA CORRELATIONS

From a macroeconomic perspective, Mozambique can be described as a low-income, small, relatively open economy, with a nascent financial market that has extremely limited connections with global capital markets. In terms of monetary and exchange rate policies, Mozambique has been operating under a flexible exchange rate regime for well over a decade (although there has been some intervention by the authorities from time to time). It can also be described as a “commodity economy,” because of the large share primary commodities occupy in production and exports. Like most low-income, developing countries, commodities represent more than 95 percent of total merchandise exports, although one could plausibly argue that aluminum, which makes up about 60 percent of Mozambique’s exports, is a manufactured product. We treat aluminum in this study as a commodity export because of its commodity-like properties and because of its world market pricing characteristics.

The composition of Mozambique’s exports has changed considerably since 1998, when electricity, and then Mozal I in 2000, started production and exports. Agriculture’s share of merchandise exports over the decade declined from 100 percent to about 20 percent, while the share of Mega project commodities rose to about 80 percent. This changing composition of trade, and the rising dominance of aluminum after 2000, is presented in Figure 4. Considering the increasing share of aluminum over the decade, together with the growing importance of other mega projects in exports (natural gas, heavy sands, electricity), it is useful to revisit the issue of the metical’s sensitivity to swings in world market commodity prices, as we noted above. To keep it simple, we concentrate on the extent to which world prices of aluminum impact Mozambique’s real exchange rate¹¹. The real exchange rate is computed as a geometric average of the nominal exchange rate, weighted by the consumer price index in Mozambique, and its partner trading countries. The Real price of aluminum is the nominal price, deflated by the price of manufactured exports from OECD countries.

TABLE 3: COMMODITY PRICE MEANS AND STANDARD DEVIATIONS 2000-2012



¹¹ Aluminum had, by far, the largest weight in exports during the decade; also, it was difficult to obtain a consistent series of world prices and trade weights for the other Mega commodity exports, particularly for commodities such as heavy sands, which contain a number of different minerals. Hence, we could not construct a complete trade weighted price index of Mega exports and thus limited our analysis to an examination of real aluminum prices.

Beginning with a visual representation of the correlations in our data, Figure 5 plots the logarithms of the quarterly series for the real effective exchange rate and the real commodity price for the period 2000-quarter 1 to 2012-quarter 1. The graph suggests that there has been an association between real aluminum prices and the real exchange rate over the period. The real metical appears to track the real world price of the commodity with a lag. The observed correlation between the two variables, however, is not particularly tight, until the end of the decade, and the magnitude of their swings are not, on the whole, similar. But, the metical appears to decline (with a lag) when real aluminum prices are declining, and appreciate as world prices pick up.

Figure 6 shows that the real exchange rate is also correlated with relative real GDP per capita, and the metical in this case appears to track relative real output quite closely. This correlation could be explained as a reflection of the Balassa-Samuelson effect, which exerts supply-side upward pressure on the real exchange rate, as we noted above. Alternatively it could be explained as a manifestation of monetary theories of the nominal exchange rate, which predict that growth in real income raises the demand for money and causes a nominal appreciation of the currency. The fact that both real aluminum prices and relative real output are correlated with the real exchange rate tells us that we could have some difficulty distinguishing the effect of commodity prices from that of productivity on movements in the real metical.

FIGURE 5: REAL EXCHANGE RATE AND REAL ALUMINUM PRICE INDEX

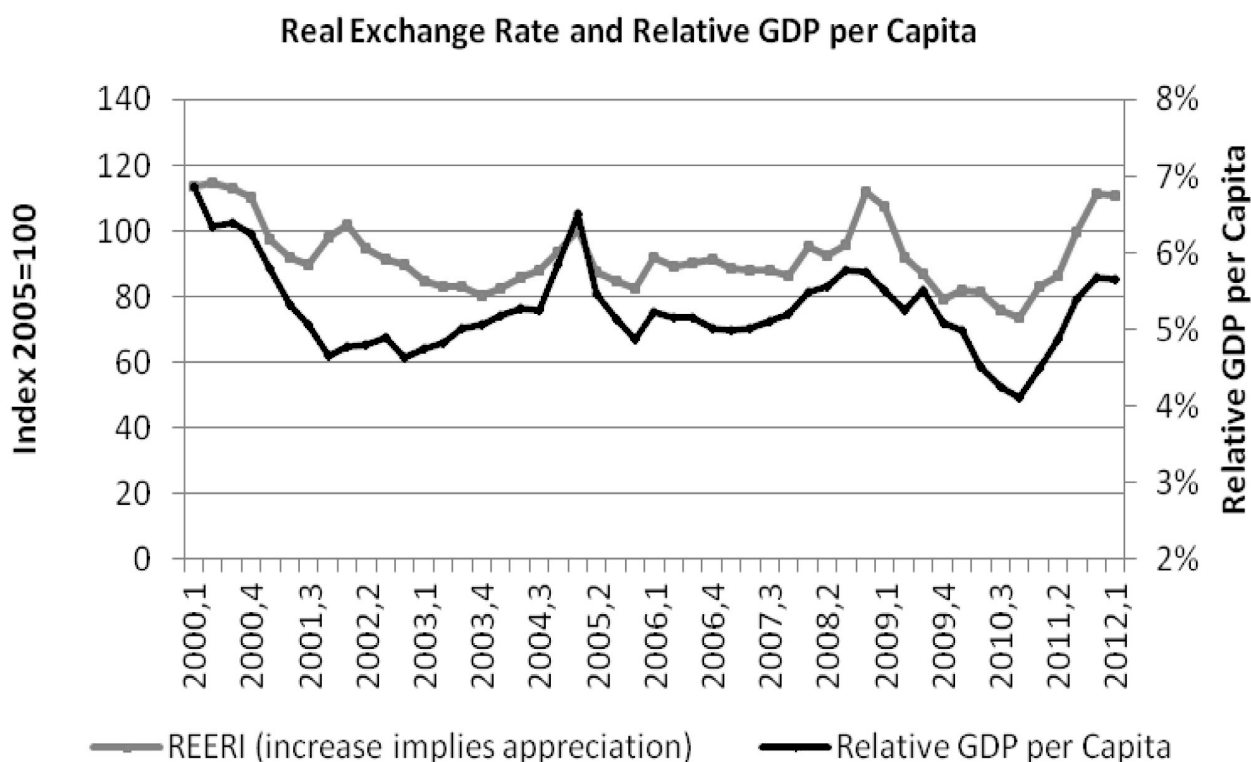


FIGURE 6: REAL EXCHANGE RATE AND RELATIVE REAL OUTPUT PER CAPITA

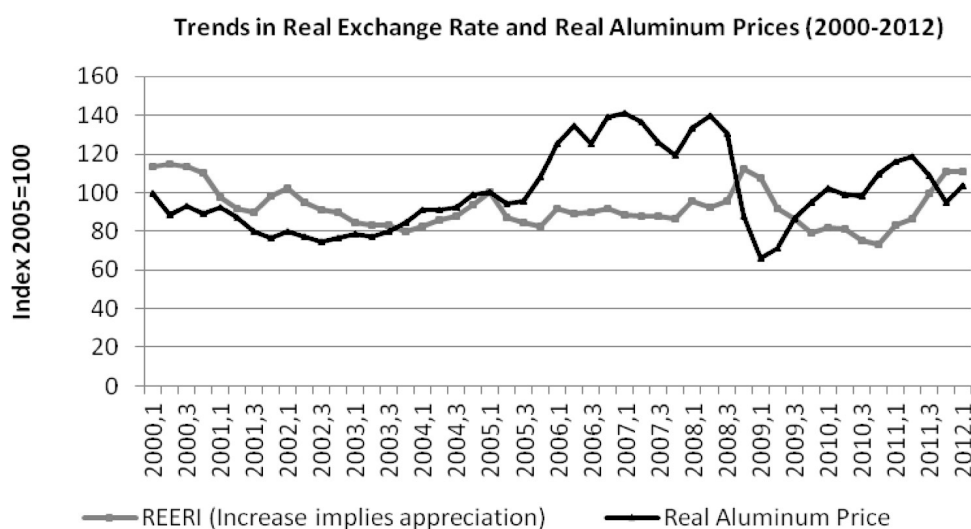
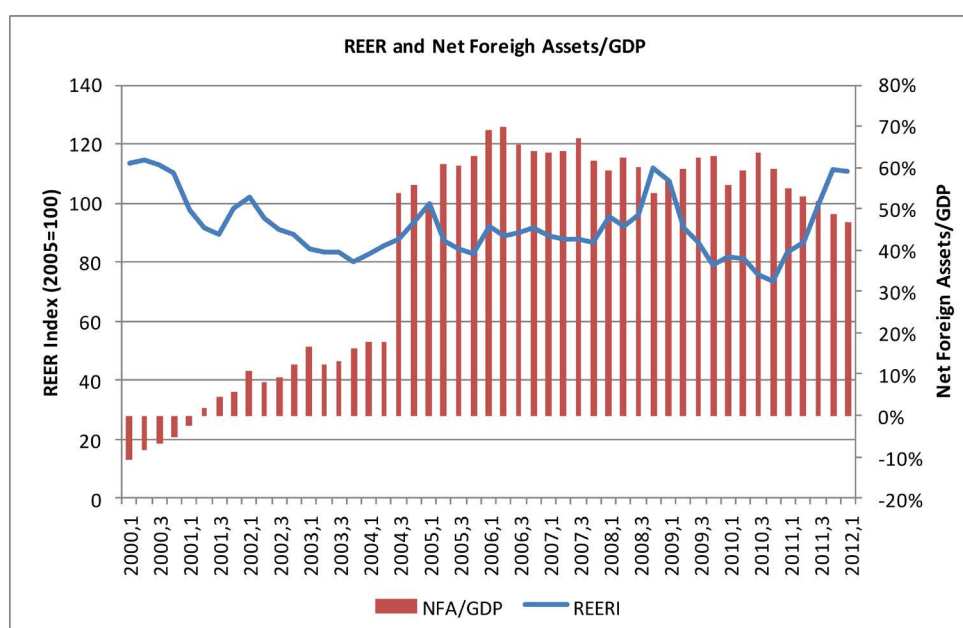


Figure 7 plots the observed association between the real exchange rate and the ratio of net foreign assets to GDP. The net foreign assets ratio reflects the demand-side impact of international capital transfers on the real exchange rate. Substantial international capital inflows have occurred over the decade. Beginning in the third quarter of 2004, there was a significant jump in the net foreign assets ratio from around 15 percent of GDP to more than 50 percent. Thereafter the ratio averaged about 60 percent of GDP to the first quarter of 2010, and then began to tapered off to just over 40 percent in the first quarter of 2012. Despite this significant increase in net foreign assets to GDP over the period, one cannot discern an obvious visual correlation with the real exchange rate. One possible reason is that the big jump in NFA (Net Foreign Assets) in 2004 is partly due to a significant decrease in foreign debt due to a World Bank/ IMF debt forgiveness program and thus does not represent an increase in demand-side factors. Another reason may be that the observed increases in net foreign assets due to capital inflows were accompanied by a rise in leakages from the economy in the form of imports and profit remittances by mega investors, reducing the potential impact of capital transfers on the exchange rate.

FIGURE 7: REAL EXCHANGE RATE AND NET FOREIGN ASSETS



FORMAL EMPIRICAL RESULTS

Establishing simple visual correlations helps us get a feel for the available data, however, we have to turn to a formal empirical analysis for more clear-cut conclusions. Since we are dealing with time-series data, the first step in this process is to address the issue of how best to model a small sample of data with near unit root behavior. Our short sample of fewer than 100 quarterly observations rules out any meaningful test of stationarity. Hence, we follow Chen and Rogoff (2004) and rely on the considerable empirical evidence suggesting that real exchange rates are stationary, possibly with a trend. The same has been found true for commodity prices (Borensztein and Reinhart 1994; Cashin, Liang and McDermott 2000). Ruling out non-stationarity/stochastic trends a priori, we focus on the case where real exchange rates and real commodity prices, as well as the other variables, are treated as stationary, possibly with trends¹².

The fully estimated model is as follows (quarterly data for the analysis includes the period 2000-quarter 1 to 2012-quarter 1):

$$\ln \text{reer}_t = \alpha + \beta_1 \ln \text{ral}_t (t-2) + \beta_2 \ln [(income \text{ per cap}) F - (income \text{ per cap}) M]_t \\ + \beta_3 \ln \text{reer}_{(t-1)} + \beta_4 \frac{NFA}{GDP}_t + \beta_5 \text{tendência}_t + u_t$$

Where:

$\ln \text{reer}_t$ is the log of the real effective exchange rate of the metical, computed as a geometric average of the nominal exchange rate, weighted by the consumer price index in Mozambique, and its trading partner countries.

$\ln \text{ral}_{t-2}$ is the world price of aluminum, deflated by the price of manufactured exports from OECD countries. It is intended to proxy the exogenous terms of trade, and so is expressed in real form. The variable is also lagged two quarters to capture the effect of sticky pricing in Mozal's contracts with its buyers. Mozal is the only aluminum exporter, therefore, its contract terms and export prices (which are adjusted only at regular intervals and do not fluctuate instantaneously with spot prices on world markets) have an important impact on the terms of trade, resulting in lagged transmission of commodity prices to the exchange rate. Our results show an insignificant contemporaneous impact of aluminum prices on the real exchange rate, while a two quarter lag provides the best fit.

$\ln [(income \text{ per cap}) F - (income \text{ per cap}) M]_t$ is the log of the ratio of Mozambique's GDP per capita relative to that of its most important trading partners. As noted earlier, this controls for supply-side effects, such as the Balassa-Samuelson relationship, which captures differential rates of productivity growth between Mozambique and its trading partners.

$\ln \text{reer}_{t-1}$ is the log of the real effective exchange rate of the metical, included to capture the idea of a dragging anchor or momentum elements.

$\frac{NFA}{GDP}_t$ is the quarterly ratio of net foreign assets to GDP. Net Foreign Assets are calculated as the sum of net international reserves of the Bank of Mozambique, plus other net foreign assets including debts in foreign currency (medium and long term liabilities). As we discussed above, this variable controls for demand-side effects, such as foreign direct investment flows, foreign aid and other international transfer payments.

We estimate this full model in four stages, beginning first with estimates, in model 1, of the commodity price elasticity of the real exchange rate treating both series as stationary with a linear trend. The OLS coefficient estimates are reported in the first column of Table 4 below. We find that real commodity prices have a significant (at the 90 percent level) impact on the real exchange rate: a 10 percent increase in the real commodity price leads to a 1.8 percent appreciation of the real effective metical.

¹² We did consider alternatives, including testing for unit roots in both the real exchange rate and the real commodity price index, and applying co-integration methods, as robustness checks for our results. The results we obtained were much weaker. If one includes the entire time period from 1995-2011, one can accept the hypothesis of a unit root (non-stationarity) in both the real exchange rate and real aluminum price series. However, for the shorter time period (2001-2011), when aluminum became the dominant export, the sample size is too small to apply these techniques in a robust manner. The trace statistics indicated co-integration with a restricted trend, but dropping/adding a few observations changed the results, indicating non-robustness of the specification.

This estimate is somewhat lower than elasticities found in other studies of more advanced and emerging market countries, where elasticity estimates average around 0.5 (Coudert, Couharde, and Mignon 2008). We also find that there are no severe problems of serial correlation in the error terms in this model, according to the Durbin-Watson and Breusch-Godfrey serial correlation LM tests¹³.

Model 2 augments model 1 by including the lagged value of the real exchange rate as an additional explanatory variable. This lagged endogenous variable exhibits high significance, suggesting the presence of either a momentum element or dragging anchor phenomenon in the exchange rate, or possibly the exclusion of (serially correlated) determinants. The Breusch-Godfrey LM test shows that the inclusion of a lagged endogenous variable reduces concerns about serial correlation further. The coefficient on the real commodity price increases in significant to the 99 percent level, however, introducing this lagged dependent variable reduces the magnitude of its coefficient. The commodity price elasticity of the real exchange rate declines from .18 to .13, such that a 10 percent increase in the price of the commodity now leads to a 1.3 percent appreciation of the real exchange rate.

TABLE 4. REGRESSION RESULTS

	Model 1	Model 2	Model 3	Model 4
Intercept	3.76***	0.84**	3.85***	3.93***
	(0.43)	(0.48)	(0.61)	(0.76)
Inreer (t-1)		0.69***	0.38***	0.32***
		(0.10)	(0.12)	(0.11)
ln(real commodity price)	0.18*	0.13***	0.10**	0.17***
	(0.10)	(0.05)	(0.05)	(0.06)
Ln(relative GDP ratio)			0.51***	0.52***
			(0.13)	(0.11)
Net Foreign Assets/GDP (2004-2011)				0.06
				(0.09)
Net Foreign Assets/GDP				-0.20***
				(0.08)
Trend	-0.002**	-0.001	-0.00	0.001
	(0.001)	(0.001)	(0.003)	(0.000)
N	49	49	49	49
Regression Rsq	0.08	0.59	0.63	0.71
Durbin Watson	1.62	1.89	1.58	1.68
LM Test (AR2)	3.91	1.39	5.79	4.55
Prob>LM	0.14	0.51	0.06	0.11

Note: Correlation corrected standard deviations in parenthesis.

****significant at 1%; ** significant at 5%; * significant at 10%.*

DW Test (~ 2) shows no serial correlation in Models 2-4

¹³ The strength of this commodity-currency relationship, particularly using the real aluminum price index, has been questioned in comments by BOM because a large share of Mozal's revenues do not accrue directly to the banking system or the economy. As we noted earlier in this study, the impact of these mega-projects in terms of taxes and profits to the Government and incomes to citizens in Mozambique have been relatively small for various reasons, even though aluminum exports represent more than 50 percent of exports and total mega-projects contribute more than 90 percent of exports. Reflecting on this issue, it can be argued that, since the real aluminum price (world price of aluminum, deflated by the price of manufactured exports from OECD countries) is a proxy for the terms of trade, another way to interpret the significance of the commodity-currency coefficient is that it is picking up the impact of commodity price shocks not just to aluminum but to all commodities, as they do tend to fluctuate, to some degree, together. That is, the real aluminum price is acting in some measure as a broader commodity price index of all Mozambique's commodity export prices. In this case, we are still left with the conclusion that a major determinant of Mozambique's long-run real exchange rate is commodity price shocks.

In models 3 and 4, we control for demand-side and supply-side shocks by augmenting the regressions with relative GDP per capita and the net foreign assets ratio. Results indicate a significant positive Balassa-Samuelson effect in model 3, showing the importance of supply-side effects on real exchange rate determination. As a result of the inclusion of relative GDP per capita in the regression, the magnitude of the coefficient on real commodity prices declines. Evidently, and not surprisingly, real income is collinear with commodity prices. But the two variables do not knock out each other when they compete side-by-side. Finally, in the fourth and full specification model, augmented with the net foreign assets to GDP ratio, all the coefficients remain significant, the coefficient on net foreign assets is, unexpectedly, negative and significant, and the magnitude and significance of the real commodity price coefficient increases. Given the sharp increase in net foreign assets after 2004, shown in Figure 7, a dummy variable was included in the regression to account for this structural break. Inclusion of this dummy variable changes the sign of the coefficient of the net foreign assets ratio and reduces its significance – the NFA/GNP coefficient is shown to be positive for the 2004 to 2011 period, but it is not found to be significant. This could be due to multicollinearity issues, as NFA/GDP is correlated with real aluminum prices (the correlation coefficient is 0.59), which is significant at 1 percent level. However, dropping real aluminum prices from the equation did not change the results – again, when competing side by side these two variables do not cancel each other out. In fact, controlling for demand-side shocks via the net foreign assets ratio positively influences the magnitude and significance of the estimate of the commodity price elasticity of the real exchange rate. One should conclude from all of this that it is difficult to sort out the precise impact of NFA on the real exchange rate, given the available data, and thus its influence will have to await further study.

Why might one find NFA/GDP to have a negative sign in the regression on the real exchange rate, as we did for the whole period under review? Several factors may be driving this result. First, Egert, Lahreche-Revil and Lommatzsch (2005) argue that such a negative link between net foreign assets and the real exchange rate, which is found in several transition countries and in a set of small, open OECD countries, is connected to the need for real exchange rate depreciation in the long-run to service a high stock of foreign liabilities through an improved trade account. Therefore, higher levels of net foreign assets (once the desired stock is reached) require higher payments on these foreign liabilities. This is not a likely explanation for Mozambique, in that it is in a phase of development where it is moving towards a desired stock of foreign assets because its high growth potential cannot be financed only by domestic savings. The use of foreign savings implies the accumulation of foreign liabilities. Mozambique is not yet at the stage where the desired stock of net foreign assets is reached and a large outflow of payments is required to service these liabilities. It may be, however, that the significant debt relief program that influenced the NFA/GDP ratio in 2004 and thereafter had a similar impact to the events in more developed countries. Second, higher international inflows of capital over the decade in Mozambique have been linked to a sizable rise in leakages from the economy in the form of mega investor imports and profit remittances, reducing (or turning negative) the potential impact of transfers on the exchange rate. Third, an alternative explanation for the negative sign is that it might be related, in part, to the composition of net foreign assets. Some studies (Combes, 2011) have shown that it is not total capital inflows that impact the exchange rate, but the composition of the inflows. Portfolio investments (e.g., stocks, bonds and other financial instruments) are found to have the highest impact, while FDI and other transfers, which are prominent in the case of Mozambique, are found to have much less influence on the real exchange rate. Of course, this only accounts for a reduced impact not a negative impact. Studies such as Pontines and Siregar (2004) and Kaminsky and Reinhart (1999) present alternative formulations of the exchange rate pressure index.

Lastly, there is the possible influence of exchange rate intervention. If BOM (Bank of Mozambique) is actively intervening to manage the exchange rate, it is not completely flexible to respond in a predictable way to the foreign capital inflows. We examine this issue of exchange rate intervention further following an approach presented in Combes (2011)¹⁴.

¹⁴ Alternative, and more sophisticated, formulations of the exchange rate pressure index are presented in Pontines and Siregar (2004) and Kaminsky and Reinhart (1999), however, we did not have the data to pursue these alternatives.

We calculate an index of exchange market pressure

$$EMP_1 = \% \Delta e_{i,t} / (\% \Delta e_{i,t} + \% \Delta f_{i,t}),$$

Where

$$\Delta f_{i,t} = \frac{abs(RES_{i,t} - RES_{i,t-1})}{MB_{i,t-1}}$$

$$\Delta e_{i,t} = abs\left(\frac{er_{i,t} - er_{i,t-1}}{er_{i,t-1}}\right)$$

RES measures the reserve assets, and MB measures the monetary base. If the exchange rate is a pure float, and the monetary authority does not intervene to build up reserves in response to inflows of capital, we would expect the EMP index to equal 1. On the opposite end, if the exchange rate is fixed, the EMP index would be zero. Intermediate values of EMP index are related to degrees of exchange rate flexibility and monetary interventions. The net foreign assets ratio and results of the estimation of the EMP index are presented in Table 5.

TABLE 5: MEASURES OF EXCHANGE RATE FLEXIBILITY 2000-2012

Period	Net Fgn Assets/GDP	EMP Index
2000-2002	2%	0.44
2003-2005	37%	0.36
2006-2009	63%	0.31
2010-Present	57%	0.65

Table 5 shows that the metical has not floated fully freely since 2000 – it has been floating, as Calvo and Reinhart (2002) say, “with a life jacket,” as in many other developing countries. BOM has clearly been intervening over the period, reducing exchange rate flexibility (although it should be noted that, according to the BOM it does not, as a matter of policy, explicitly target the exchange rate). However, the degree of flexibility appears to have increased somewhat in the past two years as the EMP measure jumped up to .65 in the 2010-present period.

Summing up, we find that momentum effects (captured by the lagged real exchange rate), terms of trade (proxied by real commodity prices), supply-side productivity differentials or the Balassa-Samuelson effect of rising prices of non-tradables, and net foreign assets are major determinants of long-run equilibrium real exchange rates in Mozambique. Most important, the metical does appear to fit into the category of a commodity currency (although the effect is comparatively weak today), as the real world price of commodity exports does have a significant and stable influence on Mozambique’s real exchange rate – a 10 percent increase in the real world commodity price in our full model results in a 1.7 percent real appreciation. This finding does not come as a complete surprise, as commodity price shocks (both export and import) have long been recognized as of great importance to low-income countries that rely heavily on primary commodity production. However, it does underscore the fact that one of Mozambique’s key vulnerabilities in the coming resource boom will be sensitivity of the real exchange rate to commodity price shocks. Today, with aluminum as the chief commodity export, commodity price elasticity of the real exchange rate is relatively low. As other commodities, such as coal, natural gas,

and perhaps oil, become much more important in the composition of exports, this could change substantially. Higher trade volumes of these commodities, and the fact that they exhibit much higher price volatility than aluminum, will surely influence future exchange rate responses to world commodity price shocks.

The fact that we find a highly significant influence of supply-side shocks via relative GDP per capita is a decisive acceptance of the importance of the Balassa-Samuelson effect. On the other hand, we only have a few tentative conjectures for the significant influence of demand-side shocks on the real exchange rate via net foreign assets. More work is needed on this issue to establish what is going on. Finally, for time-series estimation, our sample size is small with just 49 quarterly observations, making it difficult to carry out a robust analysis of long-term determinants of the real exchange rate.

QUALITY OF INSTITUTIONS

Another significant vulnerability in the coming resource boom is the quality of Mozambique's institutions. As noted earlier, natural resource booms have been found to influence the nature and quality of a country's institutions, and this impact has been shown to be one of the main channels through which resources curse growth and long-run development. The outlook for low-income countries with weak institutions before the resource windfall is particularly worrying.

TABLE 6: GOVERNANCE INDICATORS MOZAMBIQUE 1996-2010

	1996	1998	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010
VOICE & ACCOUNTABILITY												
QUALITY SCORE	-.32	-.10	-.15	-.18	-.02	-.04	-.00	-.09	-.08	-.08	-.06	-.12
COUNTRY RANK	40	46	46	44	46	47	39	45	47	47	47	45
AVG. Q SCORE SSA	-.73	-.70	-.69	-.65	-.61	-.64	-.63	-.57	-.58	-.60	-.62	-.62
POLITICAL STABILITY												
QUALITY SCORE	-.16	-.02	-.16	.13	.19	-.07	.06	.48	.31	.35	.53	.32
COUNTRY RANK	43	46	39	47	50	42	48	61	55	57	64	57
AVG. Q SCORE SSA	-.62	-.62	-.62	-.64	-.56	-.50	-.55	-.49	-.54	-.55	-.54	-.55
GOVERNMENT EFFECTIVENESS												
QUALITY SCORE	-.47	-.39	-.43	-.43	-.54	-.56	-.51	-.59	-.49	-.43	-.44	-.47
COUNTRY RANK	53	41	38	39	34	32	36	31	37	42	40	39
AVG. Q SCORE SSA	-.74	-.72	-.72	-.72	-.72	-.76	-.81	-.81	-.79	-.78	-.78	-.80
REGULATORY QUALITY												
QUALITY SCORE	-.54	-.29	-.16	-.30	-.50	-.46	-.62	-.52	-.51	-.47	-.37	-.37
COUNTRY RANK	27	37	43	42	32	35	25	31	31	36	39	41
RULE OF LAW	-.75	-.70	-.67	-.68	-.70	-.74	-.77	-.73	-.75	-.74	-.72	-.71
QUALITY SCORE	-.83	-.81	-.74	-.67	-.73	-.63	-.70	-.64	-.59	-.60	-.59	-.50
COUNTRY RANK	23	22	29	30	27	32	32	31	33	33	34	37
AVG. Q SCORE SSA	-.75	-.73	-.72	-.71	-.73	-.77	-.77	-.72	-.73	-.74	-.74	-.74
CORRUPTION												
QUALITY SCORE	-.36	-.35	-.40	-.46	-.60	-.64	-.55	-.58	-.53	-.46	-.39	-.39
COUNTRY RANK	40	41	42	38	34	29	37	34	36	40	42	42
AVG. Q SCORE SSA	-.60	-.62	-.57	-.58	-.63	-.67	-.68	-.63	-.61	-.61	-.61	-.60
AVERAGE TOTAL QUALITY SCORE (MOZAMBIQUE)	-.45	-.33	-.34	-.32	-.37	-.40	-.39	-.32	-.31	-.28	-.22	-.25
AVG. TOTAL QUALITY SCORE (SSA)	-.70	-.68	-.66	-.66	-.66	-.68	-.70	-.66	-.67	-.67	-.67	-.67

Source: *Worldwide Governance Indicators, World Bank 2011*

Table 6 presents the World Bank's Governance Indicators for Mozambique 1996-2010, together with average quality-of-institutions scores for sub-Saharan Africa (SSA). These indicators measure the strength of a country's institutions as perceived by its citizens, public and private entities, and NGO's along a number of dimensions, including:

- Voice and Accountability (extent to which citizens participate in selecting government, freedom of expression, association, and media);
- Political Stability (likelihood government will be over thrown by unconstitutional or violent means);
- Government Effectiveness (quality of public services, quality civil service, and quality of policy formulation and implementation, creditability of government commitment of such policies);
- Regulatory Quality (ability of government to formulate and implement sound policies and regulations);
- Rule of Law (extent to which agents have confidence in and abide by the rules of society, and quality of contract enforcement, property rights, police, courts, and likelihood of crime and violence);
- Corruption (extent to which public power is exercised for private gain, including both petty and grand forms of corruption and capture of state by elites and private interests).

Quality of governance scores for each category are measured in units ranging from -2.5 to 2.5, with higher values equivalent to better governance outcomes. The country rank scores are measured for 213 economies, with higher country rankings indicating better governance outcomes compared with other countries. Table 6 also includes a total strength-of-institutions score for Mozambique, as well as regional average quality-of-institutions scores for sub-Saharan Africa.

Mozambique scores relatively poorly in institutional quality in just about all categories of governance, indicating substantial institutional weakness across the board. Particular areas of concern appear in government effectiveness and rule of law, while areas of relative strength can be observed in voice and accountability and political stability. Institutional quality, on average, has improved substantially over the last 15 years. The average total quality score, although still low, has increased by about 40 percent since 1996. Improvements in voice and accountability, political stability, and regulatory quality are responsible for most progress. There are no significant gains in quality of government effectiveness and corruption, while marginal improvements have been made in quality of rule of law. Comparatively Mozambique is doing better in terms of quality of institutions than the average for sub-Saharan Africa, as seen by the average quality scores for SSA in all categories in Table 6.

The fact that government effectiveness, corruption, and rule of law continue to be the weakest areas of governance in Mozambique is worrying because of the "point-source" resources Mozambique will be exporting in the coming boom. As we noted earlier, all the research on the resource curse highlights the fact that "point-source" resources, such as gas, mineral coal, mineral sands, which are easily controlled and managed by government, are a particular problem for countries lacking strong institutional capability. This does not augur well for Mozambique in the future.

The government has begun to adopt some initiatives that start addressing these issues, such as acceding to the Extractive Industry Transparency Initiative, which makes payments of dividends and royalties by extractive companies to government public information. However citizens in Mozambique continue to complain that, to date, contracts with mega projects have not been negotiated or managed with a great deal of transparency. Also, more generally, Mozambique has a nascent democracy, where the central government continues to have a fragile hold on the whole system and local governments have limited capability to manage quality institutions and economic affairs. On the whole, this is not the ideal starting point for managing a coming resource boom, particularly given the experience of other African countries in a similar situation. Low institutional quality will have to be a specific concern in developing policies to address a natural resource curse.

ABSORPTIVE CAPACITY AND NON-TRADABLE PRICES

Mozambique is one of the poorest countries in the world. The economy is fragile and faces the characteristic development problems of low-income countries – market imperfections are endemic, financial markets are not fully formed, human capital is scarce, and institutional quality is low. As such, Mozambique’s capacity to absorb a large resource windfall is extremely limited in the short to medium-run. Spending enormous revenues (either on consumption or investment) will raise demand for locally produced goods and services and, given Mozambique’s low absorptive capacity, the economy’s response will run into diminishing returns, reducing the value of this spending. The basic problem is that steep supply curves, particularly for non-tradable goods and factors, will cause spending to result in higher prices, including real exchange rate appreciation, which will crowd out other activities, such as manufacturing and agriculture, rather than drawing more resources into use.

Steep supply curves arise from bottlenecks in the supply of non-tradables due to (a) non-tradables requiring critical amounts of home-grown capital (human and physical) for their production, which is in short supply, and (b) inefficiencies in the business environment such as regulations and other difficulties in acquiring land, delays and costs in importing capital equipment, labor market regulations that reduce hiring and firing flexibility, and institutional weaknesses hinder drawing in new resources. Overcoming such bottlenecks and building the economy’s absorptive capacity will take time. Bottlenecks can be avoided to some degree by imports, but not all productive, human and managerial capital can be obtained from abroad, a certain amount of home-grown capital must be accumulated over time. It would also not be politically feasible in Mozambique (or in the best interests of longer-run development) to import all the human and physical capital needed to overcome absorptive capacity problems, as some oil-exporting Gulf States did. Instead, Mozambique would be better off improving conditions for investment in non-tradable sectors. This would involve (a) removing barriers to investment in the business environment, (b) promoting public investment in infrastructure and training, and (c) facilitating imports in strategic investment areas, such as skilled labor to overcome key technical bottlenecks and for training purposes.

Mozambique is weak in most areas concerned with development of non-tradable goods and factors. Only about half of the population aged 15+ is literate and Mozambique has one of the lowest levels of educational attainment in the world – 62 percent of adults did not complete at any primary school and only 22 percent completed the first level of primary school. In terms of higher education, only .26 percent of the population has a university degree or an equivalent level of education. Even in urban centers only 50 percent of the population has any formal education, only 27 percent completed the first level of primary school, and only .43 percent completed university. Hence, on average, human capital is low and skilled labor is scarce.

Low human capital is reflected in low firm-level productivity. Enterprise surveys carried out by the World Bank and others indicate that, while there are large productivity differentials between sectors and different sized firms, on average, firm-level labor productivity, as measured by value added per worker, is comparatively low in Mozambique. One World Bank study of industrial performance found, for example, that Mozambique had the lowest labor productivity in a sample of eight sub-Saharan African countries (Mozambique Industrial Performance and Investment Climate 2002, CTA and World Bank, 2003; World Bank Investment Climate Survey 2009). Studies show that productivity in agriculture is also comparatively low. Of course, productivity is not just about human capital. Inadequate infrastructure, underdeveloped financial markets, and the business environment also play an important part.

Focusing first on the business environment, Mozambique’s rank in the World Bank’s “Doing Business Report” has improved somewhat in the last couple of years, but it continues to be positioned near the bottom of the list of countries with poor business environments (World Bank 2011). Its global competitiveness index, as measured by the World Economic Forum, also languishes around the lower rungs of the competitiveness ladder (World Economic Forum 2010). Firms complain in surveys that both cost and availability of credit are problems (World Bank Investment Climate Survey 2009).

In terms of infrastructure, Mozambique has tremendous needs in all areas – roads, railways, ports, air transport, water and sanitation, irrigation, power, and communications. These infrastructure needs significantly reduce the country’s productive potential. A comprehensive study of the country’s infrastructure requirements forecasts that public infrastructure needs alone will necessitate sustained annual investment of 1.7 billion dollars over the next decade, about 25 percent of projected GDP (Dominquez-Torres and Briceno-Garmendia (2011)). Perhaps the greatest public infrastructure challenge is in the transport sector. Achievements in constructing transport corridors have provided regional connectivity and links with mining, as well as links between key production centers and ports, but connectivity among urban centers and economic clusters is limited, as there is a lack of linkages that connect parallel corridors to each other. Mozambique has just completed a much needed north-south national road, but the country has limited links among the several east-west corridors, and developing full connectivity will require sustained large investments over decades. In addition, Mozambique lags behind the rest of the SADC region in accessibility of the rural population to domestic markets. Improving accessibility will be an enormous challenge, given the size of the country and infrastructure needs. Lastly, the country has a huge maintenance challenge ahead keeping up with rapidly expanding road and rail networks. Maintaining the system will not only place a financial burden on the public sector, it will also entail a significant management burden, which will require a good deal of capacity building.

Even at this preliminary stage of the resource boom, absorption constraints are already beginning to show up in rising prices of non-tradables, particularly in urban centers. Skilled labor and real estate provide examples. Interviews for this study found that local companies in Maputo are already finding it much more difficult to retain educated employees as employment opportunities expand with rising foreign direct investment. Firms reported that monthly salaries for skilled people have risen in the past few years more than 300 percent and the growth rate of wages for skilled labor is accelerating. Real estate prices have begun to rise rapidly too. Estate agents report that rentals are increasingly difficult to find and housing prices in the favored areas of Maputo are rising 50 percent a year. Speculators who have seen the impact of natural resource windfalls in other countries are also actively beginning to bid up land prices in expectation of what is to come.

The important issue to highlight here is the sluggish nature of the adjustment to these price increases. Bottlenecks are already beginning to appear. Increasing foreign investment is causing housing demand in prime locations to outstrip supply in urban centers. Part of the reason for sluggish supply response is low productivity in the construction industry. It can take two to three years to construct a large house in Maputo, while in the US or Europe it would take three to four months to build a similar structure. It is not just the task-level efficiency of construction workers that slows things down, it is also the fact that building materials are not standardized, construction methods are not up to date, land can take time to obtain, and financing is inadequate. It is just too costly at current interest rates (and collateral requirements) to carry a construction loan for a house that takes two to three years to build.

Current price developments in markets for skilled labor and housing illustrate the effects of absorption constraints, and they warn of the problems Mozambique will face when the full force of the resource windfall hits. For example, given the problems we see today, what would happen in the future if increases in boom-related public infrastructure investment were to coincide with increases in private sector boom-related investment in housing construction? This rise in investment would surely lead to a construction boom and a rapid increase in the price of non-traded inputs. The value of public expenditure would be reduced as a result and this decrease in infrastructure investment would cause other bottlenecks in the economy – in port capacity and port congestion, for example, or perhaps in traffic congestion. Sector effects accumulate into economy-wide changes in relative prices, including higher wages and higher prices of local goods and services relative to the price of foreign goods. This causes an appreciation of the real exchange rate, and is the source of Dutch Disease and crowding out of non-resource exports.

As the examples of skilled labor and housing indicate, production of non-tradables requires inputs of home-grown capital (e.g., teachers and trainers to upgrade worker skills; land, skilled construction workers, and local finance to improve housing supply, and so on), as well as a supportive business environment to facilitate investment. Adjustment might be speeded up if key constraints can be relaxed, to some degree, by imports. But this will have to be considered carefully. For skilled labor, strategic targeting will be important in identifying key constraints and selectively using imported skilled labor to develop local capacity. For products, building materials for example, there will be a good deal of pressure for tariffs, quotas, and domestic content restrictions to make sure that the resource boom benefits local producers. It will be important, however, to make sure that critical inputs to investment in non-tradable sectors are not subject to a lot of restrictions, as the central objective should be to facilitate a speedier supply response to try to reduce the severity of potential negative spillover effects from the boom.

3. POLICY OPTIONS FOR MANAGING THE COMING RESOURCE BOOM

The negative effects of natural resource exports observed around the world, as well as the economic vulnerabilities we have underscored in this study, should not be interpreted as a foregone conclusion that dooms Mozambique to failure. The important question a resource-rich country must address is what policies to adopt to magnify the benefits of its resources and increase chances for successful development. We turn now to a discussion of policy options for managing the coming resource boom.

To inform the discussion of policy alternatives, let us begin with the known facts about revenues from natural resource exports and Mozambique's economic capacity to absorb these resources. First, revenues from natural resources result from depleting a finite stock of resources, hence they are fundamentally temporary. Furthermore, these revenues will be highly uncertain, as commodity prices are highly volatile. These distinctive characteristics of resource revenues indicate the importance of saving some portion of the revenues (a) to provide for future generations, as they are also entitled to a share of the country's resource endowments and (b) to smooth out and sustain increases in consumption, as declines in consumption are costly, economically and politically. Coping with the "commodity cycle" will therefore be an important policy concern.

Second, Mozambique is a low-income, capital-scarce country that needs to raise consumption to address poverty and to increase investment in public goods, such as education, health, infrastructure, and institutional capacity, to put the country on a sustained higher growth trajectory. Allocating resource revenues to consumption and to finance such domestic investments is thus a policy priority.

Third, Mozambique's current capacity to rapidly absorb windfall resource revenues is quite limited. The investment process in the country, at present, is not capable of delivering high returns on very large volumes of investment, as managerial and physical bottlenecks will depress marginal earnings on these investments. Supply curves in non-tradable sectors are quite steep due to scarce home-grown capital, low productivity in production, a poor business environment, weak institutional capacity, and inadequate infrastructure. And capacities associated with effective governance and economic management are nascent. These facts also mean that negative spillover effects of the resource boom, such as Dutch Disease, are apt to be stronger. Accordingly, policy options for managing the boom will be constrained by absorptive capacity and a need to moderate Dutch Disease effects.

What are the policy options under these conditions? What is the best way to manage resource revenues to raise consumption, sustainably, and increase domestic investment, while coping with inevitable revenue volatility and the other adverse effects of booming resource exports? The answer to this question has to involve a mix of spending options, as well as risk management interventions to cope with volatility and moderate the adverse effects of Dutch Disease.

3.1. RAMPING-UP DOMESTIC INVESTMENT IS THE TOP PRIORITY

The main overarching focus of revenue management in a country like Mozambique should be to raise domestic investment to much higher levels, both public and private, in order to increase economic growth and, in so doing, boost consumption. One of the chief reasons many countries with large endowments of natural resources often continue to grow slowly is underinvestment in tangible and intangible assets that are public goods. Moreover, since Mozambique's economy is capital-scarce, investment should notionally concentrate on accumulating assets by investing domestically not by investing outside the country in foreign financial assets. On average, investment returns in a capital-scarce country should be a lot higher than returns in capital-abundant world markets. This would seem to rule out policy options such as a sovereign wealth fund, which is generally set up to invest revenues in financial assets abroad. However, policy options are not so clear-cut, as we will discuss below.

Implementing this overarching priority to raise the domestic investment rate, however, involves some complications. First-off, using revenues to rapidly accumulate domestic assets in Mozambique today is hampered by a poor domestic investment process, which will severely constrain potential investment returns. Until this condition is improved and investment capacity in the economy can be built up, there is probably no other practical policy option than to buy some time by accumulating resources in a Sovereign Wealth Fund (SWF), or possibly something with a broader focus that could be called a Natural Resource Fund (NRF), which could invest both abroad and domestically. Both Funds are a form of national savings, which ensures that the gains of the booming sector are partially shared with the rest of the Mozambican community. Resources in the NRF could be accumulated in foreign assets to start with, and then as local investment capability improves, investment priorities could shift more into accumulating domestic assets. Care has to be taken not to allow the overseas investment operations of the NRF to become counter-productive, such that, instead of buying time, these operations delay improvements in the absorptive capacity for investment. Commodity Funds, such as SWF and NRF, should be transparently and professionally run, with rules to govern the payout rate and with insulation of the managers from political pressure in their pursuit of the social well-being of the nation. Also, explicit safeguards would have to be implemented to make sure that the Fund is not raided by politicians. The ultimate safeguard, of course, is transparency and the fact that the government has signed on to the Extractive Industry Transparency Initiative is a positive indication for the future.

Second, if resource revenues are to be allocated principally to domestic investment, there is no practical alternative to the government playing the principal role. The private sector will have an important part too, but it does not have the incentive to make the public goods investments in infrastructure and other areas that are required, although it can participate in these ventures. Government's lead role would have to include an effort to (a) develop a strategic plan to prioritize public investments to obtain high social returns and (b) fiscal rules to impose limits on spending from the NRF, so that the investment process of decision-making and implementation does not go downhill and spending is not pro-cyclical. Public sector capability to formulate, implement, and evaluate investment projects would also be required. But perhaps most important, government's role in raising the investment rate should also involve policies to stimulate more private sector investment. Public sector-led investments in infrastructure and other public goods will be complementary to private sector investment activity and thus will pro-actively stimulate more private domestic investment, as public infrastructure improvements increase investment opportunities and raise investment returns. In addition, the government will need to use resource revenues to improve the investment environment. This means improving the quality of institutions and other elements of the investment climate, such as the regulatory regime, tax administration, and management of public infrastructure, to encourage more private investment activity.

3.2. DIRECT DISTRIBUTIONS TO CITIZENS: ANOTHER IMPORTANT OBJECTIVE

It is clearly important in Mozambique that some fraction of the resource revenues gets into citizens' hands as soon as possible. Given the level of poverty in the country, it is important to raise consumption straight away (as the value to society of consumption now is higher than consumption in the future), and this increment to incomes would unquestionably finance some high-return private sector investments. Direct distribution of a portion of resources would also reduce some of the risk of public misuse of resources and would help to establish the principle that these resources belong to the citizens of the country and are being used to benefit everyone and not just a small elite. But it needs to be stressed that direct transfers of resource revenues to citizens should be limited to only a portion of the revenues because (a) given the volatility of revenues, consumption should be raised slowly to avoid future costly roll-backs and (b) private citizens' spending choices alone will not necessarily lead to efficient consumption or investment in a situation where there are important requirements for direct public investment in health, education, and infrastructure.

Implementing direct transfers to citizens is not an easy matter in Mozambique, however, and addressing the implementation problem would take some time. The country does not have a complete system of citizen registration and not all citizens are in the tax system. Hence, it would be difficult to make direct transfers via tax reductions, as other resource-rich countries have done. The question remains, would it be technically feasible under these conditions to make direct distributions? As Gelb and Majerowicz (2011) argue in their study of the possibility of direct distributions in Uganda, in a situation with no infrastructure set up for general institutionalized direct distributions, a program running through several layers of government – central, district, municipal – would certainly incur substantial “leakages”. But establishment of a good system is not an impossible task. Several governments have successfully introduced broad-based, direct distribution systems, including South Africa (pensions, child allowances, disability payments), Pakistan (low-income females, flood relief), Andhra Pradesh (social transfers, employment guarantee payments), and Bangladesh (social transfers). Following in the footsteps of these experiences, Gelb and Majerowicz recommend that the most efficient approach would be to use new technology, including biometric identification, smartcards and electronic payments into mobile bank accounts, to make direct distributions to households through the banking system. A national registration, or ID system, would be needed to implement this program. Such a national ID scheme would also produce added benefits beyond the direct distribution program, such as providing a foundation for improvements in the tax system, for carrying out poverty reduction, education, and health strategies, and for extending financial access to traditionally under-banked citizens.

3.3. COPING WITH VOLATILITY

Finding the best way to manage the commodity cycle will be an important risk-related concern in managing windfall resource revenues. Volatility of commodity prices is a prime reason why many resource-rich countries experience poor economic performance. There are two kinds of volatility that require attention: (a) the longer-run, and more predictable volatility of depletion of the natural resource base and (b) the short-term volatility connected with world market fluctuations in commodity prices. Managing longer-term volatility associated with the uneven time profile of revenues due to resource depletion is largely a matter of making high-return investments in domestic assets that increase future incomes, and saving a portion of windfall revenues for future generations. The experiences of many commodity producers show that they generally save too little, on average, and especially in the booming segment of the commodity cycle. Therefore, institutions, such as the SWF or NRE, which insure that a portion of export revenues are saved during booms, is one of the most important ways to cope with volatility (possibly assisted by rules to help manage the cyclically adjusted budget surplus).

Managing exposure to unpredictable, shorter-term volatility associated with external fluctuations in world prices will require the use of several policy options. At the outset, it should be noted there are a number of policies that have been used in developing countries to deal with commodity price fluctuations, which have not had much success: marketing boards, price controls for consumers, overly heavy taxation of natural resource production, producer subsidies, and cartels. Each of these measures, in its own particular way, has ultimately failed to stabilize the effects of fluctuating commodity prices and, in many instances, has actually increased volatility and instability (Frankel 2011).

Ultimately, it is probably best to accept that commodity prices fluctuate and to look for established devices that will mitigate adverse effects that result from volatility. One option would be to make contract terms with international extraction companies explicitly dependent on future market conditions. The best method for doing this is to index contracts – if world prices increase (decrease) substantially over a specified period, then the contract can stipulate that profits (losses) should be split in a certain way. This up-front arrangement would minimize disputes and citizen discontent, reduce problems that can arise in renegotiation of contracts, which can be costly, and allay the reputation damage that can be caused by renegeing on contracts.

Another option is to hedge revenues through futures contracts, forward markets, and options. But these financial instruments are generally short to medium term vehicles, less helpful for periods when prices remain low long for a long time, and are largely of use to public sector sellers of commodities. In Mozambique, international investors would be doing the hedging, which could help in some measure to stabilize contract-related revenues flowing to government.



Maputo's downtown - Mozambique

Lastly, in accepting that a certain amount of volatility is an inevitable part of being a natural resource exporter, policymakers have the option to decide, ahead of time, which economic variables will be allowed to fluctuate. Collier et al. (2010) recommend that, among the three available alternatives – consumption, the country's net foreign asset position, and domestic investment – it is best to let investment fluctuate. Allowing a large part of world market fluctuations in commodity prices to whack consumption is costly. Adjustment costs for firms, households, and the public sector, once a particular level of consumption is achieved, can be substantial. And for the government in power it can also be politically problematic to roll back established programs, given a decline in resource revenues supporting these initiatives.

As for the economy's net foreign asset position, it is intuitively appealing to focus on reducing the effects of the commodity cycle by borrowing and lending in international capital markets. Unfortunately, the Stabilization Fund that would be required to substantially smooth out the domestic economy, given the unpredictability of commodity prices and revenues, would have to be so large that it would not be a practical option. There would not be enough resources left after fulfilling the Stabilization Fund needs to maintain current consumption and domestic investment, and the benefits of the accumulated resources would mostly go to future generations. But this does not mean that all stabilization activities should be avoided. Some borrowing and lending in international capital markets should be part of the policy package, but it is not a practical option for extensive smoothing of the economy.

For short and longer-term effects of the commodity cycle the best option is to let investment fluctuate. A fluctuating domestic investment rate is congruent with a considerable amount of stability in productive capacity and output. Moreover, even in well performing economies, investment is more volatile than other components of income, and dealing with these fluctuations is not an enormous problem. As investment capacity is improved in Mozambique, and the investment rate is increased to much higher levels, fluctuations in investment should also be easier to manage, as investment will be a large component of GDP. The important policy concern should be how best to manage the investment process, given volatility, such that the economy can avoid very large sudden drops and increases in investment.

¹⁵ Accumulation of international reserves by BOM can also be viewed as another way to cope with volatility by saving in boom periods and dis-saving in busts.

3.4. DEALING WITH DUTCH DISEASE

One policy option for dealing with problems of Dutch Disease is to do very little. Exchange rate appreciation and other effects of Dutch Disease can simply be viewed as equilibrium, comparative advantage phenomena that reflect a change in the underlying economic fundamentals in response to a foreign exchange windfall, which, by itself, has benefits. FDI inflows will slow down over time, while revenues from the new discoveries, and inevitable terms of trade shocks, will continue until resources are depleted. Some non-resource tradable activities will decline and some non-tradable activities will prosper. Viewed in this light, Government's role would be to assist in facilitating the adjustment process, but not in stopping or moderating the adjustment caused by Dutch Disease.

This option might be workable in a high-income, advanced economy, where the costs of adjustment are relatively modest, and where there are available resources and expertise to assist in tempering adjustment costs, even though it might be somewhat politically difficult to do so little. But in an economy like Mozambique's, as we have tried to show, Dutch Disease effects on economic growth and on welfare would be much more substantial, and could damage longer-run development prospects, if allowed to get out of hand. Therefore, policymakers will have to be pro-active in taking steps to moderate the effects of Dutch Disease.

One of the most important policies for moderating these adverse effects is the SWF or NRF that invests resource revenues, in the early stages of the resource boom, abroad, to buy time for improvements in absorptive capacity. Investing abroad reduces spending effects in the economy and generates capital exports, which would offset, in part, the impact of FDI capital inflows. Hence, the Fund would moderate exchange rate appreciation and the effects of Dutch Disease. This policy of accumulating foreign assets can be looked at as a special kind of exchange rate protection policy, designed to benefit firms in the lagging, non-resource tradable sectors of the economy in a uniform way, not selectively.

Another way to protect the exchange rate is by accumulating international reserves via foreign exchange intervention by the Bank of Mozambique (BOM)¹⁵. Reserve accumulation would assist in achieving a desired level of moderation of real exchange rate appreciation. Particularly in the early stages of the boom this would be a key part of the policy package, but there are some difficulties with this type of intervention, once the BOM has accumulated enough reserves, as judged by precautionary and monetary criteria, that reduce its desirability as a long-run strategy. When the BOM accumulates foreign reserves to moderate exchange rate appreciation, this operation can lead to rapid increases in the money supply and cause inflation. Thus, even though nominal appreciation has been avoided or reduced by intervention, the inflation produced by intervention can result in real appreciation. To sidestep this problem the BOM has to sterilize the monetary effects of the exchange rate intervention. This involves the BOM selling bonds (or raising reserve requirements in banks), which withdraws money from the market, and returns the money supply to where it was before intervention.

To additional problems are caused by this operation. First, for the market to absorb the bonds the BOM is selling the interest rate may need to rise, which can have effects on the economy. Second, the interest rate that the BOM receives for its foreign reserve holdings (typically reserves are held by central banks in US treasury bills, which currently earn 1.5 percent) will probably be less than the interest rate it has to pay in the domestic market on the bonds it sells. This is a loss (called a "quasi fiscal deficit") due to intervention and sterilization, and, with a continuous program of intervention to manage boom-related effects, this loss could become quite large and must eventually be paid by the government. To avoid this problem the government must run a fiscal surplus, and then, with the money that it saves because of this surplus, it would buy the bonds that the BOM sells. In this case, the domestic interest rate would not be impacted, but the policy of sterilized exchange rate intervention is now associated with a contractionary fiscal policy. In the end, this reserve accumulation policy by BOM turns out to be very similar to a policy of accumulating revenues in a SWF or NRF. To achieve a desired moderation in real appreciation, both of the policies increase savings, or forgo domestic investment, and both invest abroad.

A third possible exchange rate protection policy would be to reduce net capital inflows by various means when and if they were to become too large. Any policy (for example, controls or taxes) that reduces net capital inflows either by reducing gross inflows or increasing capital outflows will put downward pressure on the nominal exchange rate, or reduce an appreciation that would have occurred, moderating Dutch Disease effects. Alternatively, private entrepreneurs might be encouraged to invest additional capital abroad via, say, tax concessions. In both of these cases, less capital would be invested in Mozambique by foreigners, domestic private investors, or by the government.

Finally, there is the option of moderate the effects of Dutch Disease via some type of selective protection. In general, the policies that can be grouped under this heading are less desirable alternatives. Difficulties of selecting who gets subsidies and tax breaks and implementation problems are numerous. Furthermore, uneven protection can be inefficient and generate a lot of rent-seeking. In addition, there are the general equilibrium effects of selective protection to think about: import protection for some activities (for example, manufacturing) may actually cause additional exchange rate appreciation, which would worsen the Dutch Disease effects on other activities (for example agriculture or tourism). If selective protection is going to be provided to deal with Dutch Disease effects, it is best to apply it across the board to non-resource tradables, as is done in the case of the exchange rate



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CHAPTER 1.2
**MOZAMBIQUE'S NATURAL
RESOURCE BOOM:
WHAT IS DUTCH DISEASE,
HOW HAS IT AFFECTED OTHER
ECONOMIES, AND HOW CAN IT BE
MANAGED?**

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INTRODUCTION

Natural resource booms can sometimes lead to undesirable macroeconomic and sectoral economic impacts, stemming from a chain of events commonly referred to as “Dutch Disease.”

The term “Dutch Disease” originated in a 1977 article that appeared in the British news magazine, *The Economist*. The article discussed a natural gas boom that took place in the Netherlands and its macroeconomic impact on the country’s manufacturing sector. Natural gas was first discovered in the Netherlands in 1959; exports of gas and export values grew in the 1960s and especially 1970s, when global petroleum prices rose significantly. As natural gas revenues grew, the value of the country’s currency, the guilder, strengthened by 16.4 percent in six years. On the other hand, domestic industrial production stagnated, the share of employment in manufacturing fell 16 percent in seven years, and unemployment rose. As defined by *The Economist*, “this contrast – between external health and internal ailments – is the symptom of ‘the Dutch Disease.’”

The effects of natural resource booms differ from country to country, depending on many variables, including: the source and magnitude of the boom, the country’s overall political economy and the balance of power between importers and exporters, and between rural and urban interests; capacities of government institutions to manage the economy; decisions made on government saving, spending, and investing the natural resource revenue windfall; and the behavior of global markets for the booming natural resources and for traditional export commodities.

The purpose of this note is to lay out in layperson’s language a conceptual framework for this chain of events, compare and contrast a sample of countries’ experiences with its economic effects, identify the tools used by countries to manage these effects, and suggest a simple set of indicators that Mozambique could track in order to monitor natural resource boom effects in the years to come.

1. NATURAL RESOURCE BOOM & DUTCH DISEASE: WHAT IT IS AND HOW IT WORKS

The phenomenon of Dutch Disease occurs whenever an outside shock to the economy sharply raises foreign exchange revenues into the economy. While it is commonly associated with natural resource booms, the economics literature has documented Dutch Disease resulting from large increases in foreign aid or sharp rises in prices of an existing export commodity. The occurrence of such an exogenous shock sets in motion a linked set of economic phenomena:

- Foreign exchange earnings rise. Those foreign exchange revenues may be converted, wholly or in part, into local currency. Under a regime of floating exchange rates, the nominal value of the currency appreciates. Or, if an economy operates a fixed exchange rate regime, foreign exchange revenue inflows leads to a rise in the money supply and therefore inflation (Ebrahim-zadeh 2003; Frankel 2010, p 19).

Mozambique’s exchange rate regime is characterized “de jure and de facto” as a floating exchange rate arrangement (IMF 2013, 100). Thus, for example, the value of the metical, expressed in dollars or rands or euros received for one metical, would rise, as detailed in the box below.

In 2014 the metical trades at roughly 30 meticals to one dollar, in other words, one metical worth 0.0333 dollars. If the value of the metical strengthens, one metical will buy more foreign currency. For example, if the metical’s value rose by 50 percent, one metical would buy 0.05 dollars ($0.0333 * 1.50$), requiring only 20 meticals to buy one dollar.

An appreciation of the nominal currency value, or increased domestic money supply and inflation leads to appreciation of the real exchange rate (RER).

The real exchange rate is effectively the value of the currency, adjusted for different inflation rates in different currencies, and is estimated by adjusting the nominal exchange rate by the ratio of foreign to domestic price levels (or inflation rates). If Mozambique's inflation rate exceeds that of the United States, the bilateral RER is said to appreciate, or become overvalued. Because countries typically trade with more than one partner, using more than one currency, economists prefer to consider the real effective exchange rate (REER), which is an average of bilateral RERs weighted by how much trade the country does in each of these currencies.

With the rise in natural resource exports, some domestic incomes rise. Private incomes rise as firms or workers benefiting from the boom sell or earn more through increased local spending, higher wages, etc. Governments, too, gain an increase in public revenues, usually through some form of taxation of exports (e.g., capital gains tax, export tax, income tax,...). This rise in public revenues may be offset in a developing country, wholly or partially, by a decline in official development assistance from foreign donors.

Increased private and public revenues lead to increased savings or spending, or both. When increased revenue is spent (the so-called "spending effect"), it can be spent on imports or domestic goods. Often, countries are eager for those revenues to be spent in the domestic market to stimulate linkages of domestic suppliers of building materials, transport and logistics, hospitality and foods, and labor to the mining sector. However, such increased demand may push up domestic prices. Since prices of tradable goods (i.e., goods exchanged in international trade) are determined in world markets, the only prices affected by increased domestic spending are those of "non-tradables," whose prices are set in the domestic market (such as labor, land, real estate, construction services, transport & logistics services,...).

As the nominal currency value increases or as the RER appreciates, relative domestic prices shift. The relative prices of tradables (importable or exportable goods) fall, in meticals terms, and those of non-tradables rise.

The rise in relative prices of non-tradables to tradables makes it cheaper to import than produce the same goods domestically. Also, the foreign prices of exports rise, making it more expensive abroad to buy exports, thus reducing demand for exports. This shift in relative price levels thus brings a loss of economic competitiveness in traditional tradables sectors, concurrent with the boom in the natural resources and non-tradables (especially services) sectors.

As relative prices shift away from tradables and toward non-tradables, domestic resources (labor, capital) may be re-allocated away from traditional tradables sectors, such as agriculture, tourism, and manufacturing, and into the boom activities and the non-tradables activities associated with the natural resource boom, such as construction, hospitality, and other services (the so-called "re-allocation effect"). The extent to which this occurs depends on the structure of the labor and capital markets, but if severe, this domestic resource reallocation can lead to de-industrialization or a decline in agriculture.

For example, if the world price of cotton lint is 2 dollars per kilogram arrived in Asia, at the current exchange rate of 30 meticals per dollar, a Mozambican exporter would receive 60 meticals per kilogram sent to that market. However, if the meticals strengthens, as in the example above, to 20 meticals/dollar, that same ton of lint in Asia would only return 40 meticals. Thus the incentive to export, from a domestic currency cost point of view, will fall.

Conversely, if a ton of Thai rice costs 500 dollars in Bangkok, it will cost 15,000 meticals (plus the costs of freight, insurance, and Mozambican port charges and import duties) to import that ton of rice, at the 30 metical/dollar exchange rate. Were the meticals to strengthen to 20 metical/dollar, that same tone of rice would cost 10,000 meticals instead. Thus the incentive to import, from a domestic currency cost point of view, will rise.

Economists continue to debate whether Dutch Disease is really a “disease” or not. If the natural resource boom reflects the “new normal” for the foreseeable future, that is, the natural resource reserves are expected to be exploited over the long term, then this rise in real exchange rates is not an issue and the shifts in exchange rates, relative prices, and re-allocated resources represent new equilibria for the economy.¹ For a country that has enormous oil supplies likely to last many generations, it may be perfectly reasonable to structure the economy around oil. But for countries where the reserves are not so large or are unknown, this would be a risky strategy. If, for example, exploitation of the natural resource is likely to be exhausted within a more limited timeframe – say, one generation, or twenty years – then the costs of these economic impacts are a heavy burden on the domestic economy.

A couple of additional caveats are in order. First, the reallocation away from exports may incur other costs to the economy. For example, many economists believe that manufacturing yields positive externalities for an economy, such as learning by exporting, productivity enhancements, job creation, etc. Second, the distributional effects of Dutch Disease are not insignificant. Winners are likely to be those with the skills and mobility demanded of the booming natural resource and non-tradables sectors, while losers are those whose incentives to produce decline, i.e., low-skill workers in agriculture, tourism, and manufacturing. Winners could also be urban consumers whose consumption baskets include a higher share of imported goods, or low value-added manufacturers who import a significant amount of semi-finished raw materials and inputs. Winners may also be differentiated by gender, depending on the affected sectors and the gender composition of their labor forces, or depending on the distribution of skills or other labor market attributes between men and women and the likely shifts in demand for labor created by the booming economy (Jalbert and Collier 2014).

2. NATURAL RESOURCE BOOM EXPERIENCES ELSEWHERE

SPEED (Support Program for Economic and Enterprise Development) and CTA (Mozambique Confederation of Economic Associations) are exploring the potential impacts of Mozambique’s natural resource boom on the Mozambican economy. Impacts are anticipated on the nominal value of the metical, relative prices of non-tradables to tradables (i.e., the real exchange rate), incentives to work and produce in booming vs non-booming sectors, and possible implications for de-industrialization, tourism, and agriculture.

To simulate the possible impact of the natural resource boom in Mozambique in the agriculture and tourism value chain economic profitability analyses, a 50 percent appreciation of the metical/dollar rate of exchange, from 30 meticals/dollar to 20 meticals/dollar, is used as a “worst-case scenario.” The tourism study also considered a 9.6 percent nominal strengthening of the metical, based on IMF forecasts. In the manufacturing study, which was based on qualitative assessments of cost drivers, rather than quantitative profitability analysis per se, SPEED researchers asked firms to consider how they would react if the exchange rate strengthened from 30 to 25, or even 20, meticals per dollar.

No one is suggesting that such a rise in the value of the metical will happen. However, the risks are real:

- In Nigeria, as a result of the world oil market boom in the early and late 1970s, the real exchange rate appreciated by nearly 120 percent over the period 1970-81 (Bevan, Collier, Gunning 1999, 52).
- Soaring world coffee prices in the mid 1970s led to real appreciation of nearly 40 percent in Colombia (Ebrahim-zadeh 2003).
- The oil boom of the 2000s increased revenues in the net oil-exporting CFA zone countries, which in turn led to appreciation of 30 percent (Treviño 2011).
- Biggs (2011) found 30 percent real appreciation of the metical relative to the dollar over the period 2000-2011, as Mozambique’s inflation rates exceeded those in the United States in that time period.

¹ Magud and Sosa (2010) examine comparative experiences and find no negative impact of Dutch Disease (real effective exchange rate appreciation) on total economic growth.

- In order to be able to compare experiences of countries that have been through this experience, we sought examples in the literature to compare and contrast according to impacts experienced on several key Dutch Disease indicators:
- Nominal and real effective exchange rates;
- Inflation rates;
- Government spending (ideally, one would want to track overall changes in spending, as well as changes in spending on infrastructure, education, and health);
- Wages (by skill level, if possible) and employment, in aggregate and by broad sectors, absolute numbers and shares by sector;
- Production, exports, and imports by traditional tradables (non-extractives industry exports in agriculture and industry).
- Government policies used to mitigate the natural resource boom effects.

Sufficient information was found to provide overviews of experiences with, and management of, natural resource booms in four countries: Indonesia, Nigeria, Angola, and Chile. These four exemplify a range of macroeconomic, sectoral, and management experiences. Though Angola, Indonesia, and Nigeria have each produced and exported petroleum for decades, the petroleum booms hit at different times, i.e., in the 1970s for Indonesia and Nigeria and in the 2000s in Angola. Chile has mined and exported copper for decades; today it must cope with volatility in global copper prices and thus revenues derived from the copper sector.

As seen in the table below, relative to these four, Mozambique is the poorest and least diversified economy, with the highest shares of agriculture in gross domestic product (GDP) and total employment and the second lowest share of exports to GDP. Nevertheless these stories present interesting examples of both countries that have managed their natural resource booms well (Chile, Indonesia) and countries whose economies have struggled in the wake of natural resource booms (Angola, Nigeria).

TABLE 1: COMPARATIVE ECONOMIC INDICATORS FOR SAMPLE COUNTRIES

Country (Boom Period)	GNI per capita, 2012	Poverty Headcount, vs National Poverty Line	Agriculture as% GDP, 2012	Agriculture as% Total Employment	Total Exports as% GDP, 2012
Indonesia (1974-1979)	3,420	12.0 (2012)	14.5	35.1 (2012)	24.3
Nigeria (1974- 1979)	2,460	46.0 (2010)	22.1	44.6 (2004)	31.4
Angola (2002- 2008)	4,510	36.6 (2008)	9.9	<i>N/a</i>	59.5
Chile (2007- 2010)	14,290	14.4 (2011)	3.4	10.3 (2011)	34.2
Mozambique	510	54.7 (2009)	30.3	80.5 (2003)	29.5

Source: World Development Indicators, accessed October 15, 2014

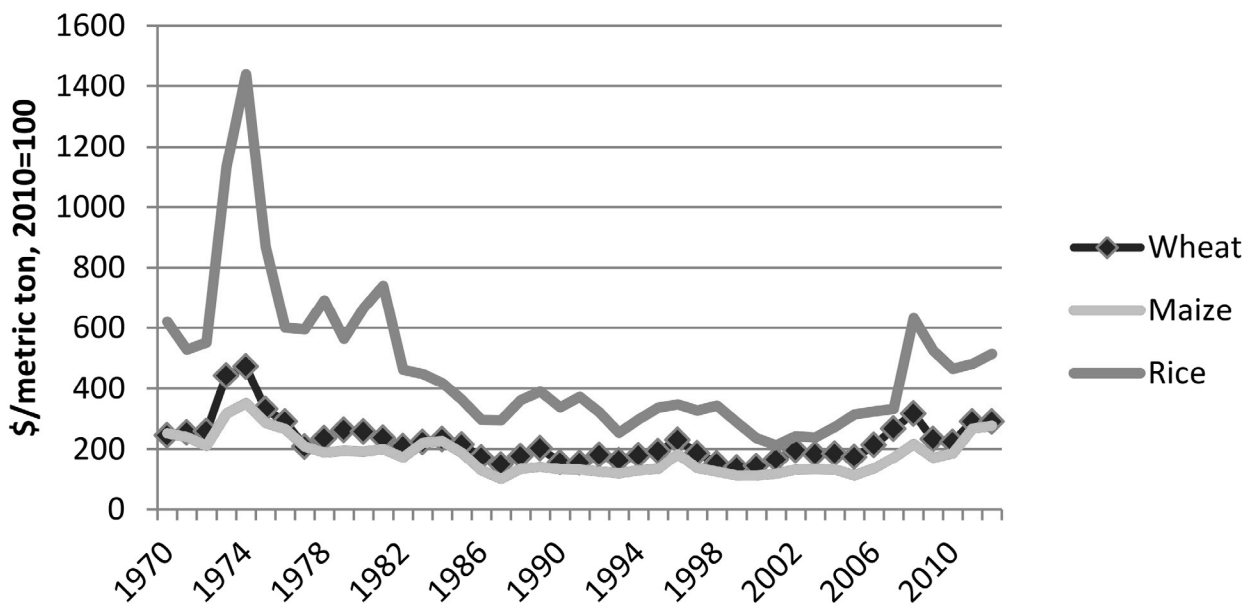
The first two examples presented, Indonesia and Nigeria, were compared and contrasted in a study by Bevan, Collier, and Gunning (hereafter, BCG) (1999) for the World Bank, which provides much of the information for the first two sections.

Their stories are quite similar and yet quite distinct. Both increased oil production in the 1960s, prior to the first global oil boom, and both exported crude oil at significantly higher unit prices in the 1970s and 80s. Yet their priorities for use of the windfall, and the political economy backdrop against which those priorities were shaped, were quite different. By the late 1980s, Indonesia's living standards had risen to triple those of Nigeria's, which fell absolutely, while poverty rates fell in Indonesia and rose in Nigeria (BCG 1999, 377). Although Nigeria's public expenditure increases provided significant new resources for universal primary education, Indonesia's emphasis on key consumer subsidies (rice, kerosene) and efforts to improve the productivity of a key good produced by poor Indonesian farmers led to the more favorable equity outcome. Moreover, Indonesia intervened directly in foreign exchange markets, devaluing when necessary to counter strong real appreciation, thereby minimizing the effect of the boom on the non-food tradables sector, whereas Nigeria tolerated massive appreciation of its currency.

BCG suggest that Indonesia's policymaking was guided by a military that understood its mandate to be broad, including poverty alleviation, whereas Nigeria's policymaking was guided by a military with a much more narrowly defined agenda that did not include poverty alleviation (BCG 1999, 419). This also eventually led to two different positions regarding confidence in markets. Whereas Indonesia embraced non-oil exports, with a large constituency tied to them, Nigeria was much more preoccupied with import-substitution and self-sufficiency.

More detailed summaries of each country's experience are presented below.

FIGURE 1: REAL GLOBAL GRAIN PRICES, 1970-PRESENT



Note: Nominal prices corrected by the World Bank MUV Index, 2010=100

Source: World Bank Commodity Price "Pink Sheet," accessed October 2014

2.1. INDONESIA (1974-1979)

Oil was first discovered in northern Sumatra in the late 1800s. During Indonesia's peak of production, 1962 to 2009, oil was exported and Indonesia belonged to the Organization of Petroleum Exporting Countries (OPEC). It resigned from OPEC as production declined and domestic demand began to exceed exportable supplies.

The first oil boom facing Indonesia occurred in the mid 1970s, 1973-79. Not only did world prices rise significantly (Indonesia doubled its petroleum export price in early 1974, following similar increases announced by Arab OPEC members in 1973), but Indonesia's volumes of exports were also growing substantially as new production came online. In 1975 petroleum represented nearly 75 percent of total exports (Usui 1997). Oil-related revenues are estimated to have risen from 620 million dollars in 1973 to 7.1 billion dollars in 1979 (BCG 1999, 244). Moreover, as seen above in the more recent case of Chile's copper price boom in the 2000s, other non-oil commodity prices were also affected by the 1970s commodity boom, and Indonesia's export volumes of timber and coffee were also on the rise. A second oil price boom from 1979 into the 1980s again benefitted Indonesia.

Export commodities were not the only ones whose world prices were rising. At the same time, Indonesia's rice market experienced substantial upheaval. After four years of domestic price stability, a poor harvest, weak stock management by Indonesia's national food logistics agency known as BULOG, and world food grain market disruption (the world price of rice soared, nearly tripling in real terms from 1971 to 1974; see Figure 1) led to significant domestic rice price increases.

Just as the world oil boom was unfolding, mismanagement by Indonesia's state oil company, Pertamina, brought about a severe fiscal crisis (BCG 1999, 251-253). The diversified conglomerate launched an ambitious program to build an integrated steel complex, including power plant, natural gas pipelines, and railway. To service short-term bonds it sold to finance the program, Pertamina re-routed a substantial sum of taxes it had collected from foreign companies on behalf of the Indonesian government, wiping out the government's expected budget surplus for 1974/75. The crisis led to significant restructuring of personnel, governance, tax collection (thereafter, directly by government, rather than indirectly by Pertamina), and existing contracts. BCG credit this crisis with a) halting Indonesia's support for semi-autonomous state enterprises, and b) creating a mood of fiscal austerity among government leaders at a time when they might otherwise have been tempted to spend down the oil windfall revenues more rapidly. It also provided an opening for a cadre of Indonesian technocrats, trained in economics in the United States in the 1960s, to influence policymaking.

INDONESIA AND DUTCH DISEASE

What impact did rising oil export revenues have on Indonesia's nominal and real exchange rates, domestic price levels, and government spending? What impacts were noted in terms of export agriculture and industry?

Indonesia maintained a fixed exchange rate regime, tied to the dollar, from August 1971 to November 1978, i.e., during the first oil boom. The rate was said to be fixed at a level that "made competing imports more attractive (BCG 1999, 254). The price of tradables fell relative to non-tradables, although %age changes are not indicated. However, government spending did not rise significantly, growing from 9.1 to 10.7 percent, 1972 to 1978. Public investment, while it did not rise substantially overall, was targeted to tradables sectors. Irrigated agriculture received support. Agriculture grew less rapidly than before, but it did continue to expand, while manufacturing expanded under the influence of public investments in state-supported industries, such as fertilizer and cement.

Though Indonesia's foreign exchange reserves were still substantial, policymakers believed by late 1978 that the commodity boom was easing. Policy advisors, aware of inflation rates in Indonesia that were higher than rates abroad, had urged devaluation² (Arndt 1978).

² From the World Bank's commodity price database, the global crude oil price is an average of the spot prices for crude oil in Brent (North Sea), Dubai (Middle East), and Texas (United States).

Moreover, although agricultural exports continued to grow (3.6 percent per year, 1972 to 1977), its growth was slowing and analysts believed that agricultural competitiveness was negatively affected by the exchange rate regime. An unexpected, sharp devaluation² and delinking of the rupiah from the dollar took place in November 1978. According to BCG, the motivation was “to make the economy more export oriented and to increase employment through the stimulus given to the production of tradables” (BCG 1999, 256). By 1981, however, “the real exchange rate improvement that devaluation afforded had been eroded” (BCG 1999, 267). Devaluation also raised inflationary expectations, fought with the introduction of domestic price controls, which led industrial producers to cut back on production (Warr 1980). Such caution regarding inflation led to more conservative spending responses during the second oil boom, and foreign exchange reserves grew. Nevertheless, real government expenditures grew by 25 percent yearly after 1979. The 1980/81 budget, for example, increased civil servants’ wages by 50 percent (BCG 1999, 262). Commodity subsidies (primarily on fuel oil, rice, and fertilizer) rose five-fold 1978/79 to 1981/82 in order to maintain domestic price stability in the face of once-again rising world prices. “The fuel subsidy alone was equivalent to 40 percent of the oil windfall” (BCG 1999, 263). Nevertheless, in their assessment of the impact of the oil booms on the Indonesian economy, BCG concluded, “There is no prima facie evidence of Dutch Disease” (BCG 1999, 304). They point to continued growth of agriculture and manufacturing throughout the oil booms. They also note that growth of services (i.e., non-tradables) did not exceed growth of traditional tradables sectors of the economy.

AGRICULTURE

As the primary staple grain in Indonesia, any disruption to domestic rice markets in Indonesia threatens political stability as well. To bring order back to the rice market the government launched multiple initiatives: expanded distribution of improved inputs for rice production, successful and broad-based dissemination of a new high-yielding and fertilizer-responsive rice variety, increase in rice support prices to farmers, investing in improved rice extension programs, establishment of village cooperatives to buy rice, import of large quantities of rice to bring down the domestic price, and subsidization of rice consumption. The fact that Indonesian policymakers kept domestic consumer prices reasonably stable during this period was a credit to their management, however, that stability came at a high cost to the public budget: “Subsidies on imported food and fertilizer ... were to be a major use of the [oil] windfall income” (BCG 1999, 246).

Encouraged by a hefty subsidy in the fertilizer price, equivalent to 80 percent of the cost of imported fertilizer, the rate of annual growth in fertilizer application to food production more than doubled from 11.6 percent 1969-76 to 24.4 percent 1977-81 (BCG 1999, 263). In a short period (1979 to 1981) the size of the rice harvest grew 22 percent.

MANUFACTURING

Indonesia sought to increase manufacturing production during the boom years as well. A 32 percent nominal increase in the government budget (14 percent in real terms) in 1981/82 provided resources for increased spending not only on wages and food/agriculture, but also in promotion of industrial policies that favored the provision of subsidized capital and energy and trade protection to support public enterprises.

GOVERNMENT POLICIES TO MANAGE DUTCH DISEASE

Two sets of policies pursued by Indonesia during the 1970s and 80s are given credit for Indonesia’s success in managing potential Dutch Disease pressures of recurring oil booms. Through its move from fixed to managed floating exchange rates after 1978 and its active pursuit of rice self-sufficiency, Indonesia managed to avoid the worst effects of real exchange rate appreciation on its agricultural sector. In fact, widespread promotion of rice productivity helped to ensure a pro-poor, pro-rural sector approach that promoted structural transformation and economic growth in Indonesia.

² The rupiah went from 1 dollar = 415 rupiah to 1 dollar = 625, a 33 percent drop in value.

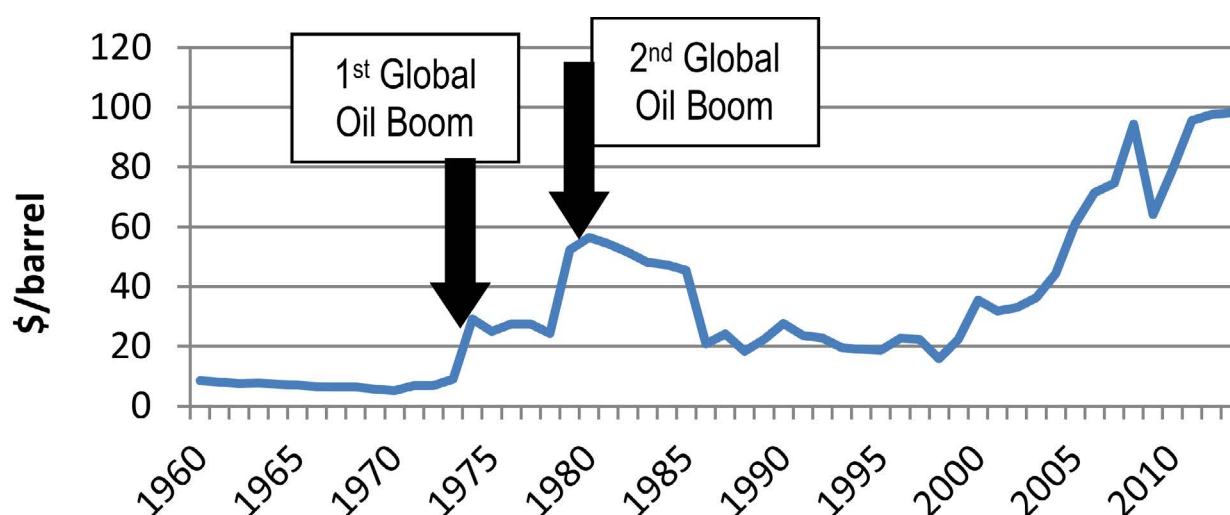
In addition, the 1970s Pertamina crisis inserted a strong measure of fiscal conservatism into policy making just as the potential temptations of the first oil boom's windfall became apparent. Reserves were allowed to grow, and government spending was increased slowly. Repayment of Pertamina's debt also provided a counter-inflationary spending use of oil revenues (BCG 1999, 389). Moreover, public spending focused on improving the productivity of traditional tradables sectors, which otherwise may have been harmed by RER appreciation.

Success was aided substantially by several exogenous factors. One, the rise in influence of Indonesian technocrats trained in the West brought economic analytic capabilities to decision makers. Successfully implementing the kinds of policies pursued depended to a large extent on the technical competence and capacity of the government. Two, along with oil Indonesia's well-established export agriculture was able to benefit from the commodity price booms of the 1970s and 80s, which counterbalanced negative RER impacts. Three, skyrocketing world rice prices also afforded a degree of protection to domestic rice producers and, again, counterbalanced real exchange rate appreciation.

2.2. NIGERIA (1974-1979)

Nigeria is Africa's largest oil producer (African countries supply 10 to 12 percent of the world's oil), and also a significant exporter of liquefied natural gas (EIA 2013). Oil exports from Nigeria began in 1958, prior to independence, and rapidly became an important source of foreign exchange and government revenue. Economic growth in Nigeria was strong in the early 1960s, about 5 percent per year, especially in oil, public utilities, manufacturing, and social sectors. However, by the late 1960s growth of the agricultural sector – Nigeria was an exporter in the 1950s and 60s of inter alia cocoa, palm kernels, rubber, and groundnuts – was beginning to slow. Manufacturing in the early 1960s, largely the processing of agricultural goods for export, began to shift to import-substitution of intermediate goods with low domestic value-added and high import content, encouraged by trade protection in the form of both tariffs and quantitative restrictions (BCG 1999, 31). Private foreign investment rose rapidly until 1967, but then eased off as concerns rose about political instability. High foreign exchange reserves encouraged little discipline with regard to government spending (BCG 1999, 27).

FIGURE 2: REAL 2010 GLOBAL CRUDE OIL PRICES



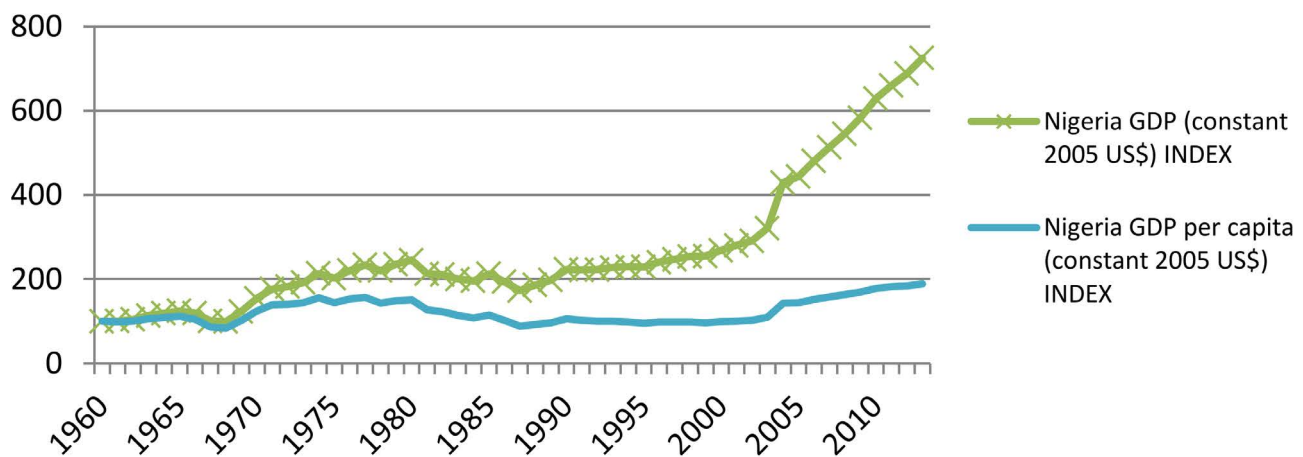
Source: World Bank Commodity Price "Pink Sheet," accessed October 2014

Nigeria's civil war involved the 1967 secession of the eastern region of the country known as Biafra in an attempt to gain control over Nigeria's oil economy. It ended in 1970 and was followed by a post-war economic boom, even before oil prices rose spectacularly in 1973. Between 1973 and 1974 ("the first global oil boom"), the nominal international crude oil price³ rose from 2.81 to 10.97 dollars per barrel, while between 1978 and 1979 ("the second oil boom") international price more than doubled; 2010 real price trends are tracked in Figure 2.

NIGERIA AND DUTCH DISEASE

Bevan, Collier, and Gunning estimate that Nigeria earned windfall revenues owing to the two oil booms, 1974-81, equivalent to "almost double annual GDP just prior to the boom" (1999, 46). According to Gelb et al. (1988), the importance of the mineral sector rose from 1 percent of GDP in 1960 to nearly 30 percent in the late 1970s. Petroleum accounted for over 90 percent of exports from 1974 into the mid 1980s. Oil revenues to the federal government "rose fivefold to form more than 80 percent of total revenue" (BCG 1999, 46). Revenue increases were also due to increased production, increased public ownership in the sector, and an increase in the taxes and royalties exacted from oil companies.

FIGURE 3: NIGERIA'S GDP AND GDP PER CAPITA INDICES



Note: Index of constant 2005 values in dollars, with 1960 as base year
Source: World Bank World Development Indicators, accessed October 2014

In the face of average annual inflation of 20 percent in the late 1970s and 1980s, the government made no adjustment of the naira's nominal value to realign its REER, appreciation of which rose from parity in 1970-72 to 129 in 1974-78, 163 in 1979-81, 194 in 1982-83, and 287 in 1984 (Gelb et al. 1988, 247-248). Instead it sought to hold back the rising tide of imports through expanded use of quantitative restrictions. This created significant rents for those agencies, companies, and individuals with access to foreign exchange and/or imports at the official exchange rate and significant burdens on competitiveness for all others (Gelb et al. 1988, 228).⁴

Nigeria's non-oil economic growth was not favorably impacted by the oil windfall. Non-mining sector GDP growth was around 5 percent per year during the boom period 1972-81 and actually contracted by nearly 6 percent per year in 1982-84. Both total real GDP and real GDP per capita decreased over the 1980s; real per capita GDP only began to grow in the mid 2000s (Figure 3). Gelb et al. suggest that the poor growth record in the early 1980s was caused by a number of factors: 1) the high share of government investment in physical and social infrastructure combined with the failure

³ From the World Bank's commodity price database, the global crude oil price is an average of the spot prices for crude oil in Brent (North Sea), Dubai (Middle East), and Texas (United States).

⁴ As one example of the extent to which foreign exchange and trade distortions play out in agriculture, Benin, which shares a nearly 800 kilometers-long border with Nigeria, imports substantial amounts of rice destined for (mostly informal) cross-border export into Nigeria, particularly when Nigeria's efforts to protect domestic production are stepped up through increased import duties and quantitative restrictions. A recent report on this decades-long phenomenon is available at Oryza.com (2014).

of that investment to stimulate further growth; 2) poor investment quality; 3) disruptive effects of investment cutbacks after the second oil boom; and 4) inefficiencies caused by foreign exchange market distortions, felt particularly in the manufacturing sector (Gelb et al. 1988, 249-251). A series of real agricultural GDP indices shows a drop that began just before the first oil boom (1971/72) and did not recover until 1990 (BCG 1999, 112).

LABOR

Labor markets in Nigeria were directly affected by the oil booms. Prior to these, agriculture employed roughly 70 percent of the workforce (Gelb et al. 1988, 227); by 1983 that figure was halved, though it rose again somewhat to over 40 percent by the late 1980s (ILO).⁵

During the 1970s, government intervened in the labor market in several ways. It dramatically increased public sector recruitment, tripling the civil service between 1973 and 1981 (BCG 1999, 65). As already mentioned, public sector wages were doubled in 1974/75. And a national minimum wage was introduced in 1978 at a level above the market wage for unskilled labor.

Researchers noted substantial gaps between rural and urban wages in the early 1970s (as much as 8 percent); the gap all but disappeared by the 1980s (Gelb et al. 1988, 255-256), which encouraged significant rural-urban migration. BCG suggest that rural labor was attracted out of food production, despite rising food prices, by the promise of increased opportunity owing to the expansion of public sector employment (BCG 1999, 386). Nigeria's poor performance in food production is attributed in part to the migration of labor out of agriculture into the rapidly growing construction sector (Gelb et al. 1988, 253).

By the 1980s, the economic boom collapsed, with negative impacts on urban employment. Nigeria's "deep recession [in 1980-87] generated layoffs, return migration to rural areas, unemployment, and large reductions in real wages" (BCG 1999, 125). The layoffs (or "retrenchment" in Nigeria) were felt primarily in the private sector, as the public sector continued to recruit workers, in part to stem the effects of the private sector contraction. However, retrenchment did not lead to complete loss of livelihoods, on average, due to reverse migration of many retrenched urban workers back into agriculture. However, unemployment rates were higher among younger, better educated workers who preferred not to seek work back in agriculture.

AGRICULTURE

Nigeria neglected export agriculture after independence, preferring to offer incentives that favored "indigenization" of Nigeria's industry. "All through the 1970s government policies affecting agriculture were contradictory ... [although] there was consistency in that the strategy for improving production relied primarily on the public sector" (Gelb et al. 1988, 245). Public expenditures were largely directed to large-scale, mechanized agriculture on parastatal farms, particularly in the south. Gelb et al. suggest that the political landscape of Nigeria at the time left no constituency to advocate on behalf of programs to improve productivity of smallholder agriculture. "At a time when GDP was growing by more than 7 percent a year, resources shifted away from agriculture," leading to a 2 percent drop in food production and a 17 percent decline in export agriculture by the mid-1970s (Oyejide 1986, 9).

By the late 1970s this decline in competitiveness led to a drop in agricultural exports and substantial food imports. Agriculture's share of exports fell from 89 percent in 1960 to 2.4 percent in 1982 (Oyejide 1986, 36-37). To a large extent, the food imports are difficult to "see" because the quantitative restrictions on imports led to significant informal trade not recorded in the official statistics.

⁵ Oyejide (1986, 9) states that 59 percent of the labor force was still engaged in agriculture in 1982.

Nevertheless, BCG argue that by the late 1970s policymakers were increasingly sensitive to the issue of food imports and the need to correct lack of competitiveness in agriculture through the promotion of self-reliance or self-sufficiency (BCG 1999, 171-172). However, government's preferred policy approach to agriculture – support for large, parastatal farms to promote “modern” agriculture –was ineffective at raising Nigeria's food production.

MANUFACTURING

Relative to agriculture, Nigeria's manufacturing sector was far less adversely affected by Dutch Disease. “In contrast to agricultural policy, industrial policy was lavish” (BCG 1999, 174). Because industrialization was seen by government as a more desirable development outcome, it received significantly more support through trade, exchange rate, and sectoral investment policies. Yet even this bias in incentives failed to jumpstart Nigeria's manufacturing sector. Growth of manufacturing never took off during the boom period, as hoped.

GOVERNMENT POLICIES TO MANAGE NATURAL RESOURCE VOLATILITY

Nigeria's government was motivated by a strong sense of national sovereignty and a belief that industrialization, not export agriculture, was the key to Nigeria's modernization (Gelb et al. 1988, 258). Industrialization was to be accomplished through strategic import-substitution initiatives. Devaluation of the naira was therefore not considered to be a viable option to manage the RER appreciation, for example.

FISCAL POLICIES

BCG note the series of choices facing Nigeria at the time, which is applicable to all countries finding themselves in similar scenarios: whether to retain all the income or share it (or some portion of it) with the private sector, whether to spend or save, which assets to use for saving, (and presumably how and on what to spend those revenues not saved). Citing analysis by Gelb et al. (1988), the portion spent by the Nigerian government on consumption and investment “preempted more than the entire oil windfall” (BCG 1999, 47).

Under pressure to distribute oil windfall benefits across a poor nation, Nigeria's government opted to spend. By 1975 government current and capital expenditures exceeded total revenues, creating negative fiscal balances of nearly 14 percent of GDP by 1983 (Gelb et al. 1988, 240). Public sector wages doubled, on average, with even higher rates of increase given to lower grade civil servants. Spending on other non-tradables sectors, such as the development of transportation and communications infrastructure in predominantly urban areas, and increases in education budgets, from 3.9 percent to 18.2 percent of budgets over the period 1973/74 to 1975/76, further contributed to domestic inflation. Public investments were also made in manufacturing sectors, while investment in agriculture lagged (Gelb et al. 1988, 244-245). Once launched, such high spending was difficult to curtail in the aftermath of the booms, and fiscal deficits continued into the 1980s, averaging 12.3 percent of non-mining GDP 1981-84 and creating further inflationary pressures (Gelb et al. 1988, 242).

After the second oil boom, Nigeria ramped up borrowing (financed largely through Central Bank borrowing) and drew down international reserves significantly to maintain spending increases. This led to international capital markets' crises of confidence in Nigeria's creditworthiness, which in turn led to the beginning of protracted stabilization and structural adjustment discussions with the IMF and World Bank, respectively. Nigeria's economic contraction after the easing of the second oil boom was the most severe of the six countries studied by Gelb et al.

POLICIES TO PROMOTE DIVERSIFICATION

Although Nigeria sought to promote diversification into non-oil manufacturing, its efforts did not materialize during the 1970s/80s. Bevan, Collier, and Gunning, writing from the perspective of the late 1990s, summarize Nigeria's Dutch Disease legacy as follows:

- The savings out of the windfall income failed to efficiently transform the boom into a permanent income increase. One reason was that the attempt to raise the domestic level of investment quickly (as opposed to accumulating foreign assets) lowered the efficiency of investment. In addition, much of what appeared as investment in the national accounts in fact represented kickbacks. Also, there was a genuine shift toward more capital-intensive projects..., the steel industry being a prime example. Finally, it should be noted that the national accounts statistics do not pick up what may well be the boom's most important legacy: the effect of the government's massive investment in education, especially in primary education. (BCG 1999, 186-187)

2.3. ANGOLA (2002-2008)

Before independence, Angola was known as a powerhouse of agricultural production. It was the world's fourth largest producer of coffee and also a significant producer of rubber, tobacco, sisal, and bananas for export. Angola was largely self-sufficient in food products and also enjoyed a thriving fishing industry (African Business Magazine 2012). A large and diverse manufacturing sector employed 200,000 people, producing consumer products such as beer, sugar, wheat flour, cooking oil, and soft drinks as well as textiles, soap, paint, plastic, and glues (Macau Trade and Investment Promotion Institute 2014).

Petroleum was first exploited commercially in 1956 by the Portuguese. Independence in 1975 was followed by more than 25 years of civil war; a peace accord was signed in 2002. During this time, agriculture and much non-natural resource based industry collapsed, although oil exploration continued as a coastal enclave. Following the peace accord, crude oil production increased rapidly, from 750,000-1 million barrels per day prior to 2002 to over 2 million barrels per day in 2008 (Consultancy Africa Intelligence 2011). Today, Angola is the second largest African oil producer behind Nigeria.

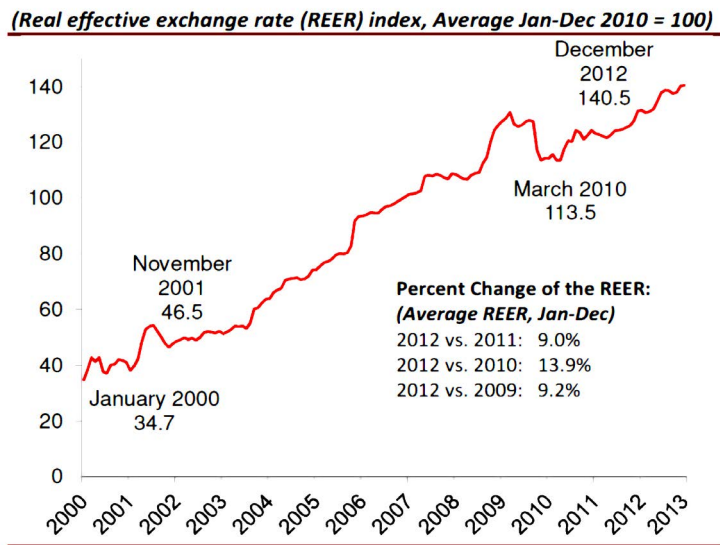
Combined with the collapse of agriculture and destruction of much of the country's internal infrastructure, oil became by far the most important component of the country's GDP, exports, and government revenue. For example, revenues derived from non-renewable resources accounted for 84 percent of total government revenue over the period 1996-2003 (Kyle 2010). In 2013 oil still made up over 96 percent of exports; diamonds were the next largest category at 1.7 percent, gas and refined oil products accounted for 1.3 percent, and "other exports" (which would include any agricultural and industrial production) are virtually non-existent, only 0.4 percent (World Bank 2014). This structure of exports makes Angola today the "least export-diverse country in Africa" (World Bank 2013).

ANGOLA AND DUTCH DISEASE

After repeated bouts of boom and bust and periods of hyperinflation during the war, Angola's macroeconomic situation was regularized in the post-war period and inflation brought under control. The nominal exchange rate had depreciated during the war period, remained relatively stable through 2007, and then appreciated slightly (Kyle 2010). The government intervened regularly to keep the Kwanza nominal rate fairly stable at around 75 to the dollar.

However, given Angolan inflation rates well in excess of US inflation, its RER appreciated significantly from 2000, moving rapidly after 2003 (Figure 4).

FIGURE 4: REAL EFFECTIVE EXCHANGE RATE APPRECIATION IN ANGOLA



Source: World Bank (2013)

This is exactly what one would expect given the dominance of oil exports and a managed exchange-rate regime.⁶ The average inflation rate in 2013 was estimated to be nearly 9 percent, compared with just under 3 percent in Angola’s trade partners. No offsetting nominal currency depreciation has occurred to counterbalance the rising price level differential (World Bank 2014). The Angolan RER is currently overvalued by between 10 percent and 25 percent (IMF 2014a), with an average real appreciation of 12 percent per annum observed for the last decade. Given these trends, Kyle (2010) estimates that between 2001 and 2008, profit margins of trade-exposed producers declined by 72 percent on average, which is staggering given the business environment constraints already facing the non-oil economy.

IMPACTS BY SECTOR ARE SUMMARIZED BELOW

AGRICULTURE

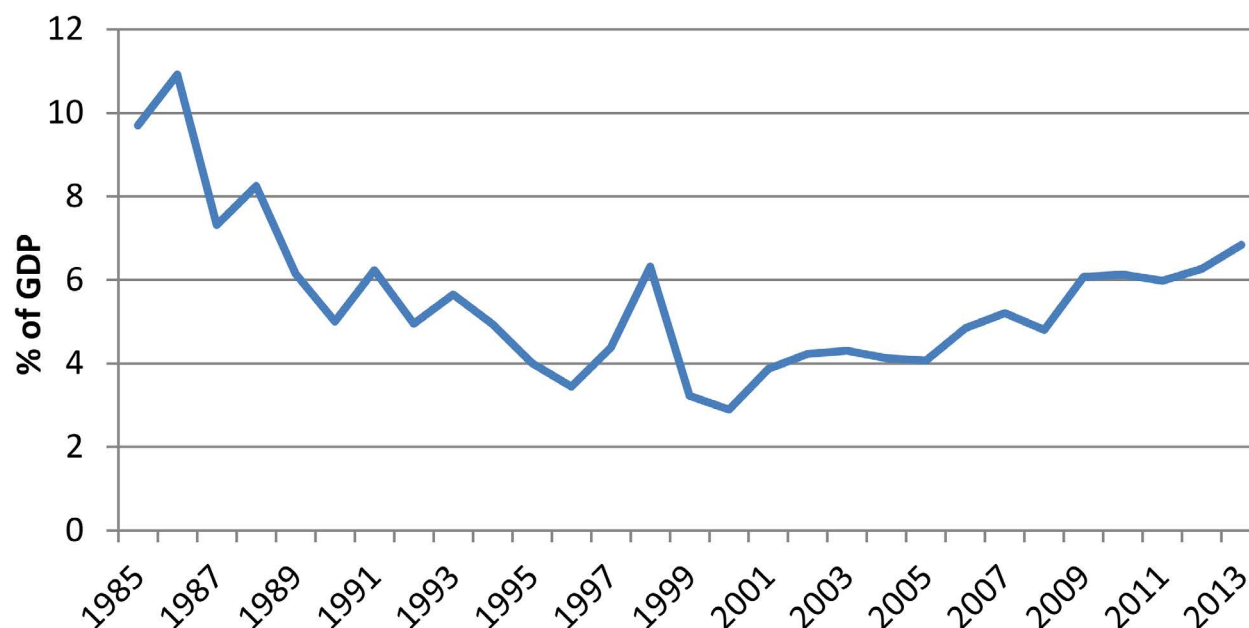
The World Bank has stated that “the [real] appreciation of the Angolan Kwanza is significantly diminishing the competitiveness of the non-oil economy (...) a stronger Kwanza has had a negative impact on Angolan manufacturers and, especially, farmers, who are also facing a decline in the cost of imported food” (World Bank 2013, vii-viii).

Agriculture today employs around two-thirds of Angolans, and suffers from extremely low productivity (World Bank 2013). Commercial agriculture and exports virtually halted during the war. While some recovery of agricultural production has occurred since the 1990s when conflict peaked, with relatively robust growth rates observed more recently (for example, the sector grew 7.3 percent in 2012), this has been from a low base, and, according to the World Bank, is “below potential” (World Bank 2014, 19). Kyle (2010) claims that while agricultural production is higher today than it was during the height of the armed conflict in the 1990s, “it has not grown markedly, if at all, since the advent of peace in 2001/2002” (Kyle 2010, 3).

The sector faces many challenges, among them, clearly, the overvalued exchange rate. However, Angola is not only facing a threat to agriculture from Dutch Disease, its efforts to restart agriculture in an already adverse operating environment are not yielding strong results. Given Angola’s extreme reliance on imported foods for 90 percent of total demand (Maussion 2014), its consequent vulnerability to world food price shocks, and the dependence of two-thirds of Angolans on agriculture for their livelihoods, improving agricultural performance will be critical to improving overall living standards for the majority of angolans.

⁶ The National Bank of Angola managed the Kwanza to keep it trading within a band of 90 to 97.4 to the dollar, though in 2012 it adopted a policy of increased flexibility that instead aims to stabilize “reference interest rates.” (World Bank 2014, 12). The Angolan economy has also been heavily dollarized in the past, relying on the dollar for over 50 percent of credits (World Bank 2013, 17). A new Foreign Exchange Law compels oil companies in Angola to pay domestic suppliers in domestic currency through local bank accounts (World Bank 2014, 14) and the dollarization ratio is coming down.

FIGURE 5: ANGOLAN MANUFACTURING AS SHARE OF GDP



Source: World Bank Databank

MANUFACTURING

The size of Angola’s manufacturing sector is small, though its share of total GDP has grown in recent years. Falling from 1985 to 2000 from 11 to 3 percent, the share has recently risen to around 7 percent of GDP in 2013 (Figure 5).

The World Bank has observed in Angola that “important structural issues constrain the development of the manufacturing sector. The most salient of these is the appreciation of the real effective exchange rate” (World Bank 2013, 3). Many firms were nationalized after independence, and then privatized in the 1990s. Some foreign investment has occurred. For example, a South African packaging company opened a plant in 2011 and plans exist to build two more plants in the future, while the IFC approved loans in 2012 to a cement factory and a soap manufacturing company (African Business Magazine 2012).

LABOR

Very little information, and even less hard data, is available on labor markets in Angola. However, a clear labor effect of Dutch Disease is observed, with labor moving into the oil sector such that “the oil sector and ancillary industries ... employ the best educated and most experienced labor in the country. This further damages the competitiveness of the non-oil industries, which must cope with an environment of scarce and expensive investment capital and high labor costs for skilled workers” (World Bank 2013, 5). Strikes of teachers and health workers for better pay and conditions in 2014 demonstrate pent-up demand for wage increases, at least in the public sector. Certainly, the labor market presents a constraint for growth, with a predominance of low skills and lack of productivity, unsurprising given the legacy of the war. The government has put in place some measures to tackle this, including plans for the construction of 35 technical institutes with Chinese financial support. However, curricula need updating and more teachers need to be trained (African Business Magazine 2012).

RELATIVE PRICES OF TRADABLES AND NON-TRADABLES

There is evidence of increases in prices of non-tradables in Angola, with an “explosion of property values... in Luanda in recent years” (World Bank 2013, 5). Growth in the construction, real estate, and domestic commercial sectors (all non-tradable sectors) has consistently outpaced growth in agriculture and manufacturing (World Bank 2013).

GOVERNMENT POLICIES TO MANAGE THE BOOM

How has Angola managed its natural resource boom, both in terms of managing the inflow of revenues from oil exports as well as promoting diversification in non-extractives industry sectors?

MANAGING OIL REVENUES

In recent years the Government of Angola has initiated a number of reforms aimed at managing the oil revenues on a sustainable and more transparent basis and smoothing macroeconomic fluctuations. Two funds were launched to manage oil funds. The first, the Oil for Infrastructure Fund, was established in 2011 with a developmental agenda focused on investments in water and electricity. A second, the Sovereign Wealth Fund, was set up in 2012 to act as a stabilization fund, although it is not clear where the funding came from, or how much of the funding for the former was fed into the latter (Economist Intelligence Unit (EIU) 2014). Recent publication of an audit of the second fund is a positive step in terms of transparency (EIU 2014). However, further work is needed to define precise fiscal rules for the fund, i.e., rules that stipulate under what conditions funds can be drawn into the state budget. The IMF is working with Angola to develop a sovereign Asset and Liability Management Framework to define the size and characteristics of the fund, consistent with macroeconomic objectives (IMF 2014a).

INCREASING ECONOMIC DIVERSIFICATION

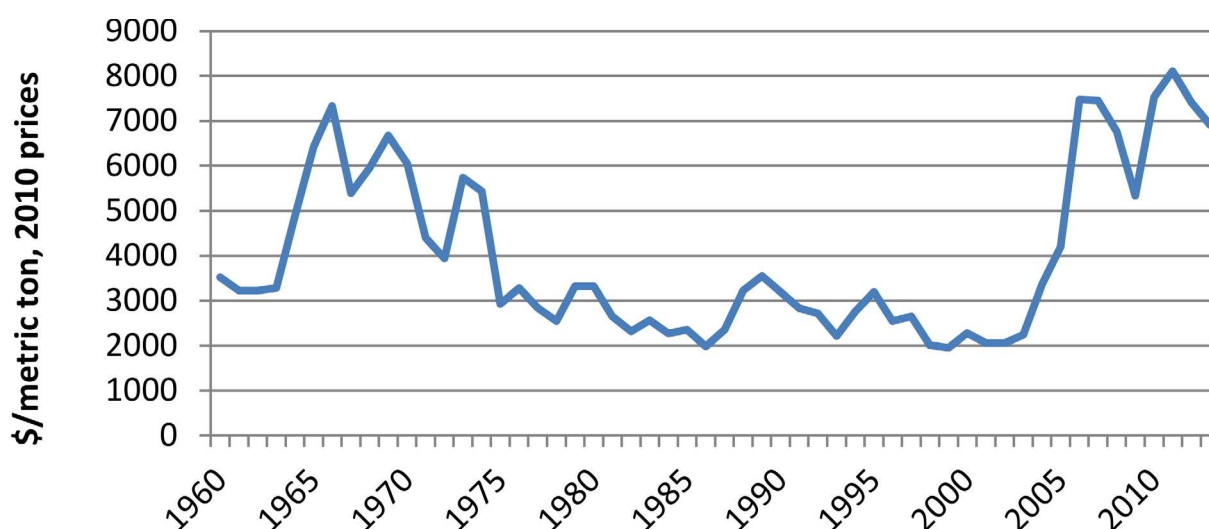
The Government of Angola has also in recent years recognized the danger of high dependence on oil and the need to create jobs. The oil industry employs less than 1 percent of the workforce (African Development Bank 2013). Angola’s weak business environment is also well recognized. The country ranked 179 out of 189 economies in 2014 in the World Bank’s Ease of Doing Business Index, behind the average for sub-Saharan Africa. Other indicators, such as the World Economic Forum’s Global Competitiveness Index, show broadly the same result. Some measures have been introduced to improve the overall business environment. Other measures include a comprehensive program of public investment particularly aimed at improving transport linkages.

More controversially, Angola recently opted for increased protection of domestic markets. A number of import duties were introduced on goods that it believes can be produced locally, including many household goods, construction materials, and foodstuffs. The duty on imported eggs, for example, has been increased from 5 percent to 30 percent. The government also now applies “sin” taxes on items such as tobacco; beer now has a 50 percent import tax. The government also imposed a total ban on imports of cement in March 2014 to promote purchases from local cement plants that were being undercut by cheaper Chinese imports (EIU 2014).

The purpose of the import duty increases is to reduce Angola’s imports and promote local industry so as to diversify the economy and create local jobs. Also, Angola hopes to position itself for membership in the Southern African Development Community Free Trade Area (EIU 2014). While the IMF has warned that these should be for a limited period and phased out “before they become inefficient” (IMF 2014b), the government sees these as necessary protection to local agriculture, agro-processing, and manufacturing. Some impact may already be visible. For example, a local bottle manufacturer, Vidrul, is planning to increase local capacity significantly, expecting to benefit from an increase in import duties on drinks and bottles from 2 to around 60 percent (EIU 2014).

Other recent government initiatives include a state program to stimulate the textile industry and the cotton industry to supply it. A new 74,000hectare plantation, partially funded by South Korea, is planned for Kwanza Sul, once the heart of Angola’s cotton industry. The Ministry of Agriculture is targeting annual output of 100,000 tons of cotton, with 40 percent expected to come from smallholdings and the remainder from commercial plantations. At the same time, investments are being made to upgrade textile factories. By the end of 2014 Angola should have three newly renovated textile factories, with two more new facilities planned for 2015. The Japan Bank for International Cooperation has provided Angola with a 1 billion dollars credit line to pay for the upgrades, with Japan-based Marubeni Corporation leading the rehabilitation work. In addition, spinning and weaving equipment from Japan, South Korea, and China is being imported to operate the new units, according to local media reports.

FIGURE 6: REAL WORLD COPPER PRICES



*Note: London Metal Exchange, Grade A
Source: World Bank Commodity Prices “Pink Sheet”*

2.4. CHILE (2007-2010)

Chile’s challenge is not the recent discovery and exploitation of natural resource wealth, but rather the world commodity market volatility that accompanies it; between 2000 and 2011 real copper climbed more than fourfold (Figure 6).⁷

Copper has been mined commercially in Chile since US companies opened mines at the start of the 20th century. Over Chile’s history the mining sector was first nationalized, then (partly) privatized again. Chile currently supplies about one third of the world’s copper, by far the largest country supplier.⁸

Copper’s share of the Chilean export basket has diminished over the last fifty years. Until the 1970s, copper played a huge role in the export basket, as high as 70 percent, but this dropped to 35 percent by 2002. Since then it has increased to 50 percent-60 percent, almost entirely due to a massive increase in world copper prices (Meller and Simpasa 2011). Today, Chile produces a third of the world’s copper. Exports of copper represent over 50 percent of Chile’s total exports (IMF 2014) and 20 percent of the country’s GDP (The Economist 2013). The country is also the world’s second largest producer of gold and a major producer of lithium (KPMG 2014).

⁷ Real world copper prices soared four-fold in the 2000s, as seen in Figure 6.

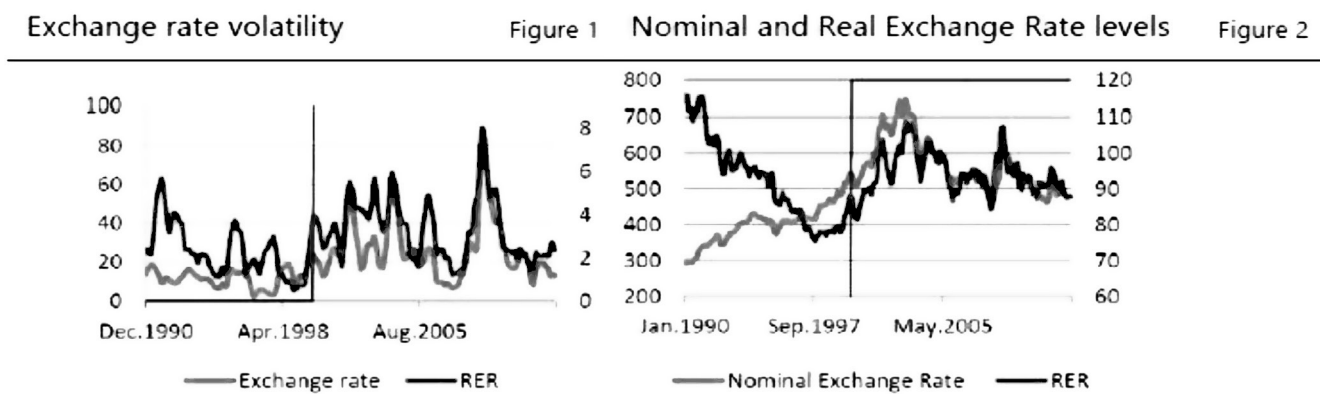
⁸ Reuters news service reported recently that “Chile’s copper boom begins to fade as production headaches mount.” Increasingly difficult regulatory hurdles to launching new production sites are cited (Cambero and O’Brien 2014).

Despite this reliance on natural resource wealth, Chile has been able to avoid the potential impacts of Dutch Disease and other “resource curse” effects. GDP per capita has grown strongly, but more importantly, poverty rates have fallen significantly faster than the regional average (McMahon 2010). Chile has relatively strong institutions, high levels of human capital, and a stable macroeconomic environment, all of which help to avoid the natural resource curse.

The reduced impact of copper price fluctuations on the business cycle is also due to strategic macroeconomic policies (De Gregorio and Labbe 2011). Particularly since the introduction in 2000 of fiscal rules that determine how natural resource revenues are to be saved and spent, the government has been able to successfully insulate the wider economy from fluctuations in the world price of copper, thereby smoothing volatility of copper export revenues on the Chilean economy.

During the 1990s, Chile followed different versions of a “crawling peg” approach to setting the exchange rate, whereby the nominal exchange rate was set based on some function of previous months’ inflation. During this time, the RER showed a significant appreciation. This had a negative effect on some exports in manufacturing, but overall productivity gains

FIGURE 7: NOMINAL AND REAL EXCHANGE RATES, CHILEAN PESO, 1990-2006

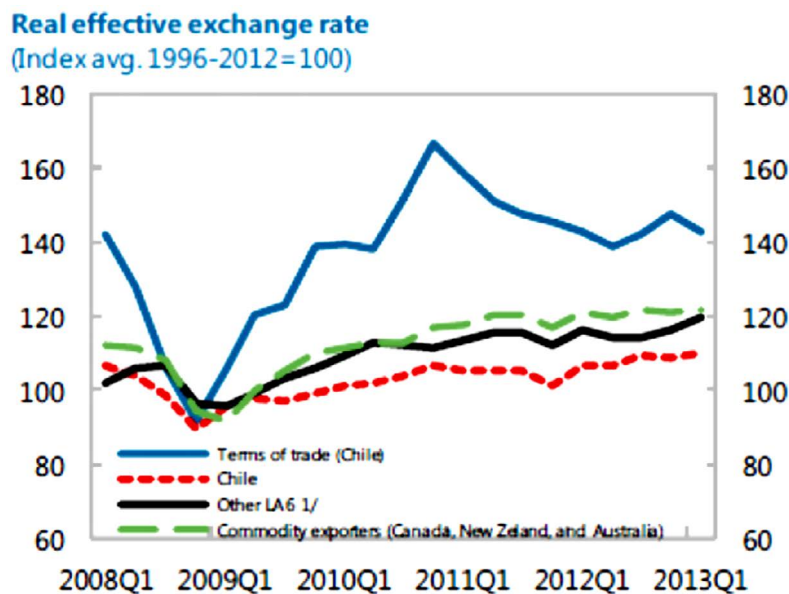


Nominal and real exchange rate volatility measured as the rolling standard deviation within a year, based on monthly data. The nominal exchange rate is measured as pesos per dollar, and that an increase in the Real Exchange Rate index is a depreciation.

Sources: Central Bank of Chile and authors’ estimates

Source: Claro and Soto (2013)

FIGURE 8: REAL EFFECTIVE EXCHANGE RATE, CHILEAN PESO, 1996-2012



Source: IMF (2013)

in both agriculture and, particularly, manufacturing seem to have more than compensated, with “overall manufacturing exports coping relatively well with the appreciation of the RER” (Guerguil and Kaufman 1998). At the end of the 1990s, a fully floating nominal exchange rate system was introduced. Since then, the RER has shown no real trend for appreciation (or depreciation) (Figure 7) (Claro and Soto 2013). More recent data suggest a slight upward trend (Figure 8).

In 2013, the IMF concluded that while the RER was “on the strong side” it was “not clearly overvalued” (IMF 2013b). During this time, both agriculture and manufacturing have expanded considerably, showing impressive growth in output and productivity. Meller and Simpasa (2011) find that growth in manufactured exports have increased strongly since the start of the mid-2000s commodities price boom, the opposite of what one would expect if Dutch Disease were present.

CHILE AND DUTCH DISEASE

For these reasons, Chile is often cited as an example of a country that has “got it right” when it comes to managing natural resource revenues prudently and avoiding negative consequences for the competitiveness of non-extractives industry sectors of the economy.

In the period 2000-05, the government’s income from mining averaged 2.1 billion dollars per year. Due to booming commodity prices and steady output levels, this increased to 11.5 billion dollars per year between 2005 and 2011 (Economist 2013). In relative terms, taxes on the mining sector went from 1.4 percent of GDP in 2005 to 3.8 percent just two years later in 2007, then plunging to 0.8 percent in 2009, according to various IMF Article IV staff reports. This huge increase, driven largely by rising demand from China that in turn increased world prices, shows the extreme dependence of the Chilean economy and the Chilean government’s revenue on world copper prices and the volatility to which they are subject.

LABOR

Mining in Chile absorbs just 1.5 percent of employment, down from 2.6 percent in the 1980s. Some indirect employment is also created, but this is limited (De Gregorio and Labbe 2011). Chile’s agricultural sector also provides employment for less than 5 percent of the total workforce, suggesting that the economy has already undergone substantial structural economic transformation.

In analyzing the impact of the mid-2000s boom in copper prices on wage differentials (between skilled and unskilled), the IMF found that labor in tradables was on average more highly skilled than labor in other parts of the economy. Wages of skilled workers increased faster than those of unskilled workers from the start of the terms-of-trade shock (IMF 2010). The combination of a higher concentration of skilled labor in the booming sector and increasing wage levels in this sector meant that the terms of trade shock worsened the wage gap.

Labor rights have also been a key part of government labor policy, and there has been a high emphasis on training and increased productivity (KPMG 2014). Chile is considered one of the most successful developing countries in terms of effectively implementing an investment program in human resources (Perone 2014). According to the Economist (2013) some mining sector wages in the Chilean mining industry are higher than in the United States.⁹ Chilean workers are also organized and quick to strike. A shortage of skilled labor in Chile’s mining sector has led to increases in wage levels as unions have threatened strike action (KPMG 2014).

⁹ The example given is of mining truck drivers, who are said to earn 10,000 dollars more in Chile, compared with the equivalent in the US.

AGRICULTURE AND MANUFACTURING

Agriculture, including export agriculture, has been an important part of Chile's economic modernization. Manufacturing, on the other hand, of non-extractives industry-related products has been a small share of the overall economy.

Under Dutch Disease we would expect to see a negative impact of an appreciated RER on the competitiveness of these other tradable sectors of the economy. However, this impact has been “mild,” according to Chilean Central Banker Sebastián Claro. He attributes this in part to the fact that the prices of Chile's main exports aside from copper – horticulture, seafood, beverages, etc. – also benefited from global commodity price booms during the same period and the 2000s (Claro 2013). The rise in world prices of Chile's agricultural exports thus provided a counterweight to the surging extractives exports prices.

Moreover, the impact of Dutch Disease in Chile and consequent threats to competitiveness were also countered by significant improvements in manufacturing and agriculture sector productivity (Claro 2013). This is especially true in agriculture, where average labor productivity has increased three times faster than in the aggregate. The trend of industry was similar to the aggregate, while the mining industry experienced a significant fall in average labor productivity. In Chile, even services sectors (commerce, financial services, construction, telecommunications) have seen their average labor productivity rise significantly faster than the aggregate, as foreign direct investment has stimulated productivity (and even export growth) in these fields.

GOVERNMENT POLICIES TO MANAGE NATURAL RESOURCE VOLATILITY

As seen, RER appreciation was present in Chile in the 1990s, but did not seem to have had particularly negative effects on traditional tradables sectors of the economy. Both manufacturing and agriculture achieved strong improvements in productivity that enabled them to remain competitive. More recently since 2000, no evidence of Dutch Disease has been observed. Chile seems to have been successful in avoiding a significant appreciation of the RER, despite booming copper prices. During this time, non-copper exports also boomed.

FISCAL POLICY LEADING TO STABLE MACROECONOMIC ENVIRONMENT

Fiscal rules and institutions established by Chile have enabled the country to maintain macroeconomic stability despite volatile copper prices. As a result, the impact of fluctuating copper prices has reduced over time. Prior to the 2000s, “the Chilean economy generally went into recession when the copper price collapsed” (De Gregorio and Labbe 2011, 4). Since then Chile has maintained economic growth during times of low copper prices.

One of the impacts of the fiscal rules is that surpluses do not immediately enter the national economy, but are instead saved for leaner times. This dampens the “spending effect” associated with Dutch Disease, and thus moderates the significance of upward pressure on prices of non-tradables, and hence RER appreciation.

Since 2001, Chile has structured its fiscal policy around the “structural balance rule” (Marcel 2013; Perone 2014). The goal is to isolate revenues – and the economy – from cyclical factors. In effect, it is a way of ensuring discipline so that government is ‘forced’ to save when times are good (e.g., prices or output are higher than trend) in order to be able to spend (i.e., stimulate the economy) when times are hard.

Structural revenue is determined by two independent panels of experts and reflects what revenue would have been if the economy had operated at potential rather than actual output, and what copper revenue would have been at a medium-term, reference, world copper price as opposed to actual price.

Under these rules, the government can run a deficit larger than the target if output is below its medium-term equilibrium, if there is a recession, or if the price of copper is below its medium-term equilibrium (Perone 2014). The use of independent panels of experts aims to ensure transparency and lack of political interference.

The vehicle for saving surpluses is a fiscal stabilization fund, formerly known as the Copper Stabilization Fund and replaced by the Economic and Social Stabilization Fund established in 2007,¹⁰ which invests in international financial instruments, thereby avoiding pressure on the Chilean peso. The fund

...has accumulation and withdrawal rules based in part on a reference copper price determined annually by the authorities. In practice, the copper reference price is based roughly on a 10-year moving average. When the price of copper exceeds the reference price by between 0.04 and 0.06 dollars a pound,¹¹ 50 percent of the state copper company's revenue is deposited in the fund. If the price of copper is above this range, 100 percent of the revenues are deposited in the fund. Withdrawals from the fund, which are governed by rules that are symmetric to the deposit rules, have generally been used to subsidize domestic gasoline prices (Perone 2014, 163-164).

Due to high prices for copper, Chile accumulated 19.5 percent of GDP in its stabilization fund by 2008 and was running a fiscal surplus of over 8 percent. It is unlikely that the government would have been able to resist calls to spend some of the surplus without the fiscal rule. Instead the rule provided for funds that underpinned one of the largest fiscal stimuli in the world (relative to the size of the economy) during the global recession of the late 2000s (De Gregorio and Labbe 2010).

PROMOTING ECONOMIC DIVERSIFICATION

Chile has long been committed to diversification of its economy. Championed by Fundación Chile, a public-private partnership established in 1976, operating today with support from the Chilean government and the multinational mining giant BHP Billiton, and Corfo, a state development agency (Economist 2010), new sectors, technologies, and exports have been introduced. For example, new high-value, counter-seasonal fruits and vegetables have been promoted through a commitment to agricultural research (Economist 2010). As another example, Chile's government convinced General Electric to set up a software development center. Today, Fundación Chile proactively introduces technology innovations and develops companies in target industries including agribusiness, marine resources, forestry, environment and chemical metrology, human capital, and information and communication technologies. Among its successes is a new method for packaging beef that enables ranchers to export it more easily, and the introduction of raspberries, blueberries, oysters, and salmon for overseas markets (World Bank 2014).

3. POLICY OPTIONS TO CONSIDER

The four experiences presented in this note have shown how different countries – with different starting points, political economies, economic bases, institutional capacities, attitudes about exporting versus substituting for imports, approaches to exchange rate management, labor sector policies, agricultural policies, industrial policies, trade policies, and fiscal priorities – have experienced natural resource booms in different ways.

They also highlight the fact that governments have policy options to consider when confronted with natural resource booms and the windfall gains they produce:¹²

¹⁰ See <http://www.hacienda.cl/english/sovereign-wealth-funds.html>.

¹¹ By way of comparison, the world copper price in September 2014 was 6,872 dollars per metric ton, or 3.12 dollars per pound. The fiscal rule is, therefore, equivalent to 1.3 to 1.9 percent variation.

¹² This note ignores the issue of fiscal treatment of the extractives sector, which determines the magnitude and possibly the regularity of the windfall gain transfers. See Calder (2014) for a guidebook to those options.

- Whether to save some or all of the windfall gain in a foreign exchange account managed by the central bank;
- Whether to keep those savings as foreign reserves or convert some or all into local currency, and if so, at what rate;
- Whether to spend part of the gain, and if so, how much, when, and on which priorities,¹³ ideally, spending should be focused on investments that will increase productivity in the longer run (such as those undertaken by Indonesia in its rice sector¹⁴) rather than on spending that will more likely fuel immediate domestic consumption and thereby put further upward pressure on domestic prices (such as the public sector wage increases granted in Nigeria);
- If opting to spend, how to ensure “smart investments” that do not intervene in markets but rather provide the horizontal “level playing field” needed by producers and firms to access skilled labor, technology and inputs, and markets;
- How and via which institutions to engage in “countercyclical” saving and spending, that is, saving during boom times and spending during lean times; this may involve funds (referred to as “commodity funds” or “sovereign wealth funds” or other names) that are governed by fiscal rules defining when it is appropriate to spend surpluses (such as the rule utilized by Chile) and assuring that expenditures are made transparently on-budget;
- Whether to distribute some portion of the windfall directly to citizens on an equal per capita basis via what is called a “lump sum distribution;”^{15, 16}
- Whether spending on tradables is to be encouraged so as to minimize the upward demand pressure on non-tradables, via trade liberalization or relaxed capital controls on outflows.

The choice of exchange rate regime, i.e., whether to maintain a fixed, floating, or managed floating exchange rate regime, also shapes the impact of increased natural resource revenues on the local economy. This is usually a given, not a policy decision variable. Managing the exchange rate, however, is a policy decision, e.g., whether to anchor the exchange rate to inflation (and if so, which price index) or to one or a basket of export prices. Ebrahim-zadeh (2003) suggests that countries may wish to consider foreign exchange market interventions to manage pressures to appreciate the nominal currency value, selling domestic currency to try to moderate upward pressure on the domestic currency.

To moderate the effects of Dutch Disease, i.e., impacts of exchange rate appreciation, Biggs (2012) recommends some combination of a savings fund, accumulation of international reserves by the central bank, and reducing net capital inflows or encouraging capital outflows. He also mentions the possibility of “selective protection” of threatened sectors, though acknowledges the many risks associated with such an option. He also points to the need to accelerate productive domestic investments, promote increased consumption by citizens, and manage volatility aspects of the natural resource-derived revenues.

Perone (2014, 163-166) summarizes policy options in terms of “two complementary approaches.” The first is to adopt an institutional mechanism and accompanying transparent fiscal rules that allow the government to smooth consumption of natural resource-derived revenues over time (i.e., a sovereign wealth fund, as used successfully in Chile). The second is to invest, consistent with the country’s development strategy, in public goods that will help to improve the competitiveness of non-booming tradables sectors, e.g, human and physical infrastructure and improved business environment.

¹³ Brahmhatt et al. (2010) present the “permanent income approach” that calculates the expected net present value (NPV) of all expected net future revenues and then the real annual annuity, received forever, that would yield the same NPV. The rule would say to spend only the value of the annuity, saving the rest abroad for the future.

¹⁴ Nigeria’s increased public expenditures on physical infrastructure and primary education were investments made in this vein as well, though BCG (1999) claim they were ineffective.

¹⁵ As an example, the US State of Alaska established the Alaska Permanent Fund in 1976 as its oil pipeline was nearing completion. At least 25 percent of revenues from oil sales must be placed in this fund. The principal may only be used for income-producing investments, it may not be spent. The earnings from those investments are distributed via dividend checks to qualified Alaska residents. For more information, see <http://www.apfc.org/home/Content/aboutFund/aboutPermFund.cfm>.

¹⁶ Alternatively, the World Bank in Mozambique (2014) discusses the possibility of broader revenue-sharing with local governments, suggesting ways to build local capacity to absorb such funds and spend them productively.

A government's decisions regarding the above cited options will determine, to some extent, its vulnerability to Dutch Disease and the impact thereof on different constituencies within the national economy. These are not easy decisions and involve trade-offs over time (how much to spend on current generations vs. how much to save for future generations) and between different stakeholders (importers vs. exporters, rural vs. urban consumers, consumers vs. producers, etc.).

With the benefit of 20-20 hindsight, the natural resource boom management experiences of Indonesia and Chile appear to have been more successful than those of Angola and Nigeria. Some of this success was due to the pure chance of a boom affecting all commodity prices, not just the discrete start-up of a discrete number of export streams (Indonesia's rice producers were as much "protected" by the sharp rise in global rice prices as they were assisted by the government's interventions, whereas Mozambique's boom is unique to Mozambique's launch into energy and mineral markets rather than a global commodity boom).

Some of this was due to greater institutional capacity of government institutions in both Indonesia and Chile. And some of this was due to differing histories and political economies that led to more broad-based and longer term focused priorities of government policymakers.

Compared with Indonesia and Chile, Mozambique is still a much poorer country, with much weaker government capacity and an economy that is still much earlier in its structural economic transformation. It is unlikely to be successful in "picking winners." Mozambique will benefit most from transparent expression of government's goals and priorities to let foreign and domestic actors know how it intends to move forward, establishment of transparent rules of fiscal and monetary policy to mitigate the severity and volatility of Dutch Disease, and to enable saving. Mozambique should also, consistent with its recently adopted National Development Strategy (ENDE), reinforce existing measures to enable potentially affected sectors to increase their competitiveness such as overall improvements to infrastructure, the business environment, agricultural productivity, and make investments in relevant skills and education of the current and future workforce.

4. CONCLUSION: ESTABLISHING A NATURAL RESOURCE BOOM DASHBOARD

The potential impacts of a natural resource boom in Mozambique on labor markets and the agriculture, tourism, and manufacturing sectors have been explored by SPEED in other studies. An interesting finding from that work is that the possibility of currency appreciation and the threats to competitiveness that this would impose have been relatively overlooked by the private sector in Mozambique to date, despite this having potentially very significant effects on profitability and even viability of some companies and sectors.

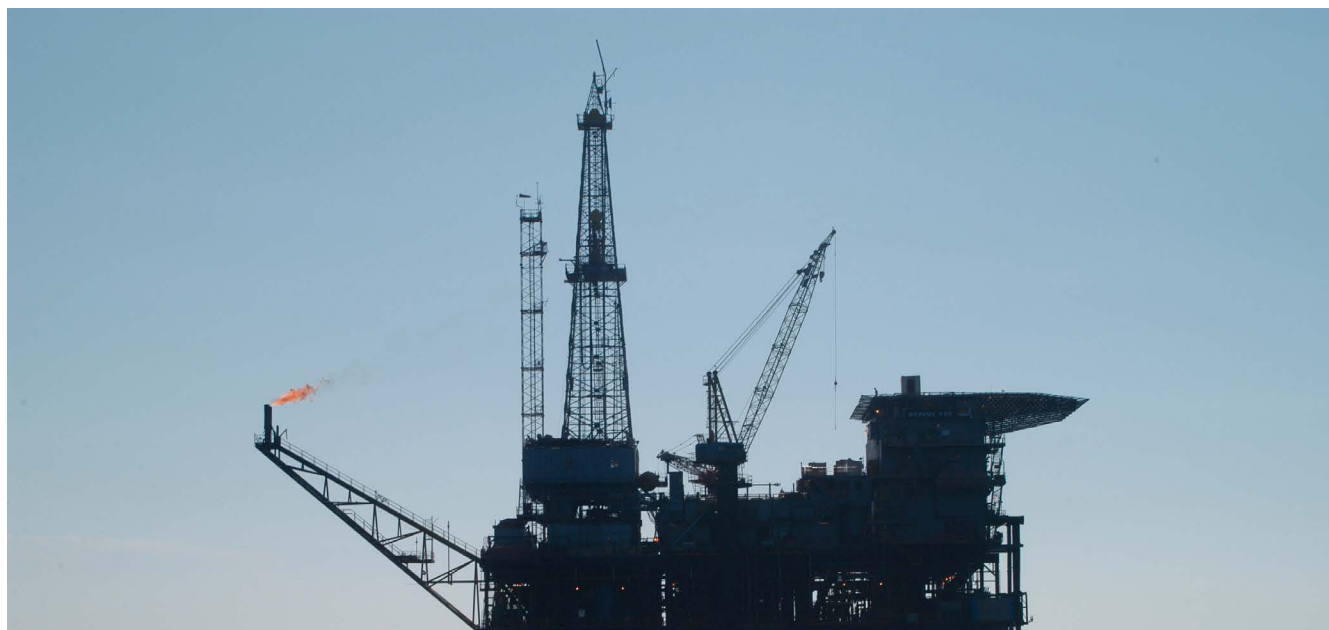
While Mozambique's economic policymakers are undoubtedly already familiar with the risks associated with natural resource booms, the private sector and the public need more information. In order to support the transparency mentioned at the end of the previous section, tracking possible impacts of the natural resource boom on the Mozambican economy and using them to inform the private sector and public is recommended.

To this end, a "policy dashboard" could be created, similar to the dashboard of an automobile whose gauges tell the driver whether the car is overheated or in need of refueling. This policy dashboard would follow trends in the variables listed here. Decision rules could be attached to these variables (such as "when inflation rises above X percent, we will do Y"). Some of these, of course, are already reported on a regular basis by the Banco de Moçambique or the National Statistics Institute, but the tracking of others may require new data collection efforts.

- Nominal exchange rates, with all major trading partners;
- Foreign exchange reserves;
- Government debt, both domestic and foreign;

- Rates of wholesale and consumer price inflation, in Mozambique and significant trade partner economies whose currencies matter to Mozambique's trade balance, e.g., the dollar, the euro, and the rand, with which to estimate real and real effective exchange rates.
- Prices of a limited number of non-tradable benchmark goods and services, such as the price of housing rentals in Maputo and several other key urban areas around the country, the price of 4-star hotel rooms in Maputo and several other key urban areas around the country, costs of transportation between major cities, construction services, etc;
- Shares of Gross Domestic Product contributed by agriculture, mining, minerals- and metals-related manufacturing, non-extractives manufacturing, other industry, and services.
- Shares of exports contributed by agriculture, mining, minerals- and metals-related manufacturing, non-extractives manufacturing, other industry, and services.
- Shares of agriculture, mining, minerals- and metals-related manufacturing, non-extractives manufacturing, other industry, and services in total employment.
- Total export volumes for key tradables outside of the extractives industry, e.g., tobacco, sugar, cotton lint, wood, bananas, shrimp, cashews (raw and processed), langoustines, clothing articles, etc.
- Total imports of staple foods, such as maize, rice, or vegetable oil; processed foods; construction materials (cement, processed metal goods); and other discretionary imports.
- Trends in government spending, in the aggregate and also broken out by target sectors, such as infrastructure, human capital development (education, training, health), as well as discretionary variables such as public sector wages.
- Public and private sector wages, by skill level and occupation for a selected number of reference occupations (e.g., entry and mid-level wages for teachers, doctors, other civil servants (public sector) as well as skilled construction workers, machine operators, accountants, human resource managers (private sector)).

Regular dissemination by the central bank or Ministry of Finance of a publication dedicated to the explicit tracking of Dutch Disease-related indicators would provide important signals to citizens and the economy that the government is aware of, and working to mitigate against, the potential negative effects and would raise awareness via the media of these possible trends.



The Anadarko and ENI complex

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CHAPTER 1.3
**IMPACT OF EXCHANGE RATE
FLUCTUATIONS ON THE ECONOMY OF
MOZAMBIQUE**

Tyler Biggs
December 2011

INTRODUCTION

The exchange rate is a central price in the economy of Mozambique. It is a key variable in establishing the domestic price level. It is the principal equilibrating variable in the country's international trade and payments. And, ultimately, it is a major facilitating variable in determining the rate and pattern of economic growth. To underscore the importance of the exchange rate in the economy of Mozambique just ask any taxi driver in Maputo for the latest Dollar or Rand or Euro exchange rate and he can tell you right away. But ask him about other important prices, such as the latest bank interest rates or evolution of the consumer price index, and he will generally draw a blank. The taxi-driver's intimate knowledge of exchange rates stems from the fact that foreign currency rates are ubiquitous to everyday life in Mozambique. Trade integration with global markets has risen fast over the last several decades, particularly in terms of imports, and foreign currency is widely used locally for consumer and business transactions (e.g., rent payments on apartments, buying consumer goods across the border, accounts payable in business), as well as for savings. This ever-present nature of foreign currency in daily life amplifies the importance of exchange rate fluctuations on the economy and captures the interest of policymakers.

The purpose of this study is to assess the impact of exchange rate shocks on the economy. The focus of attention will be on five transmission channels through which fluctuations in the exchange rate affect economic activity. The first is via domestic price determination. Changes in exchange rates generate changes in import and export prices. In the case of prices of imports, these shocks then reverberate through the pricing chain to consumer prices and producer costs. In the case of export prices, exchange rate shocks impact exporter margins and international sales. The second transmission channel is via trade flows. Exchange rate swings have expenditure-switching effects on trade volumes, as a country's products and services become more or less expensive relative to foreign goods and services. This, in turn, leads to shifts in global demand away from or toward a country's products. Third, changes in exchange rates impact firm profits in a number of ways. One way is via changes in competitiveness, which has an impact on export volumes and/or on sales of import substitutes on domestic markets. Another way is through changes in the price of firm assets and liabilities, which impacts the company net worth. The fourth transmission channel is by way of changes in valuations. Exchange rate shocks can have valuation effects on the domestic currency value of foreign assets and liability holdings. These valuation changes produce wealth effects on consumers and on firms that influence aggregate spending and investment. Fifth, the cumulative impact of all these effects of exchange rate changes can have important consequences for economic growth.

The paper is organized to follow the order of the five transmission channels enumerated above. Section 1 reviews the history of exchange changes since 1994 when the government moved to a more liberal exchange rate regime. Section 2 looks at the impact of exchange rate movements on prices. Section 3 examines the effects of exchange rates on trade flows. Section 4 reviews the impact of the exchange rates on firm earnings. Section 5 assesses the effects of exchange rate swings on valuations of assets and liabilities. Section 6 looks at the exchange rate-growth link. Lastly, section 7 concludes with policy implications of the study.

1. OVERVIEW OF DEVELOPMENTS IN THE METICAL EXCHANGE RATE SINCE 1995

Since independence in the mid 1970s, Mozambique has experienced a number of exchange rate regimes (Pimpao 1996). Until 1986, fixed rates reigned, followed by devaluation and intensive shock therapy in 1987-88, and thereafter a crawling peg regime prevailed until the early 1990s when the exchange rate was unified and liberalized into a floating-rate regime in 1994. We begin our examination of exchange rate patterns one year after the floating-rate regime was established.

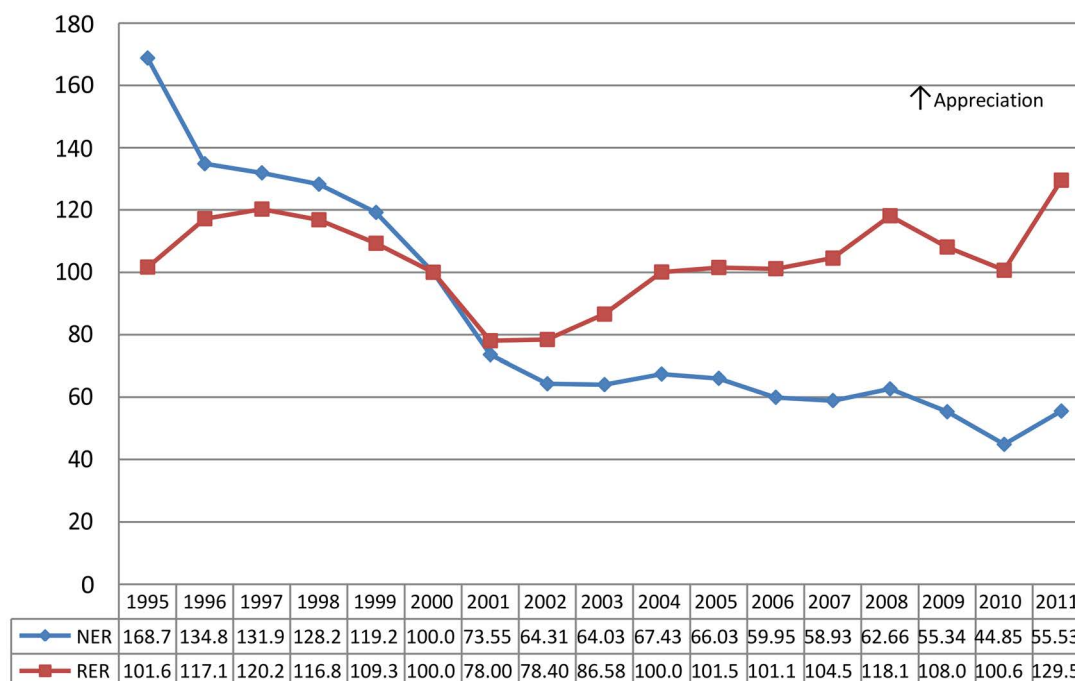
1.1. BILATERAL RATES

Figure 1 shows the history of the bilateral nominal dollar/metical exchange rate and the real, inflation-adjusted dollar/metical exchange rate for the period 1995-August 2011. The real dollar/metical exchange rate in this case is adjusted for differences in relative prices between the two countries using applicable CPI measures. It is clear from the figure that for most of the period the nominal dollar/metical exchange rate has depreciated with slight deviations from this trend beginning in mid 2000s. Most of the depreciation occurred in the years 1995 to 2003 when there was a nominal depreciation of more than 62 percentage points.

Thereafter things leveled out with minor appreciations and depreciations until 2009-10 when there was a significant depreciation of 29 percent. Much of this nominal depreciation was reversed in the first eight months of 2011, as the metical appreciated by more than 23 percent against the dollar.

As Figure 1 shows, there are major differences in the nominal bilateral and real bilateral dollar/metical exchange rates owing to accumulated inflation differentials between the two trading partners. Inflation has been much higher in Mozambique than in the US since 2000; so the real bilateral dollar/metical rate is positioned above the nominal bilateral rate for all the years to 2011. In inflation-adjusted terms, the dollar/metical rate depreciated from 1995 to 2000. Subsequently there has been a significant real appreciation of 30 percentage points from 2000 to August 2011. Much of this real appreciation occurred in the 2000-08 period when the real bilateral dollar/metical rate jumped 20 percent. Thereafter, following the nominal bilateral rate down, there was a significant real depreciation in 2009-10; after that, a 28.9 percent real appreciation occurred reversing this downtrend in January to August 2011. When all is said and done, the metical has been appreciated against the dollar in real terms since 2004 and today stands roughly 30 percentage points above its 2004 level.

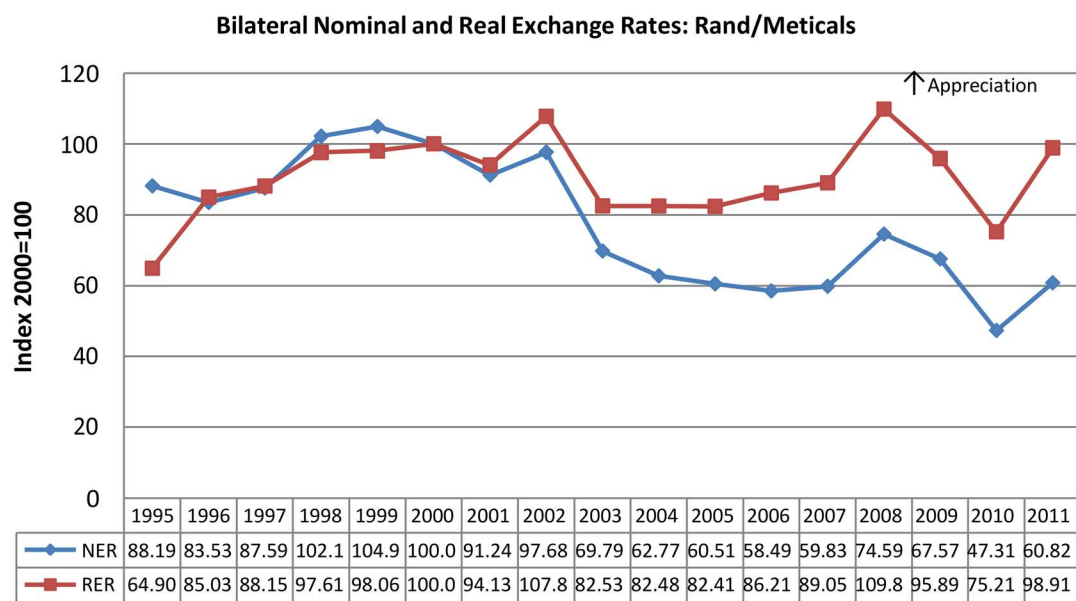
FIGURE 1: BILATERAL NOMINAL (NER) AND REAL (RER) EXCHANGE RATES: DOLLAR/METICAL



Source: IMF

Turning to the nominal bilateral rand/metical exchange rate in Figure 2, we see that from 1995-2011 the metical has depreciated against the rand by 31 percentage points over the period. Much of this nominal depreciation occurred from 2001-2010 when the rand/metical rate depreciated by almost 50 percent. This trend was dramatically reversed in 2011, as the metical has risen 28.5 percent against the rand up to August. In real, inflation adjusted terms, there was a substantial 66 percent appreciation of the metical against the rand from 1995 to 2002. In the years following, there has been significant volatility – a substantial depreciation of 23 percent in 2003, an appreciation of 33 percent 2005-08, a reversal of this appreciation of 31 percent in 2009-10, and finally an appreciation again of 31 percent up to August 2011 – however, after all this variability the real bilateral rand/metical rate ended the period only one percentage point lower than it was at the beginning of the decade.

FIGURE 2: BILATERAL NOMINAL (NER) AND REAL (RER) EXCHANGE RATES: RAND/METICAL

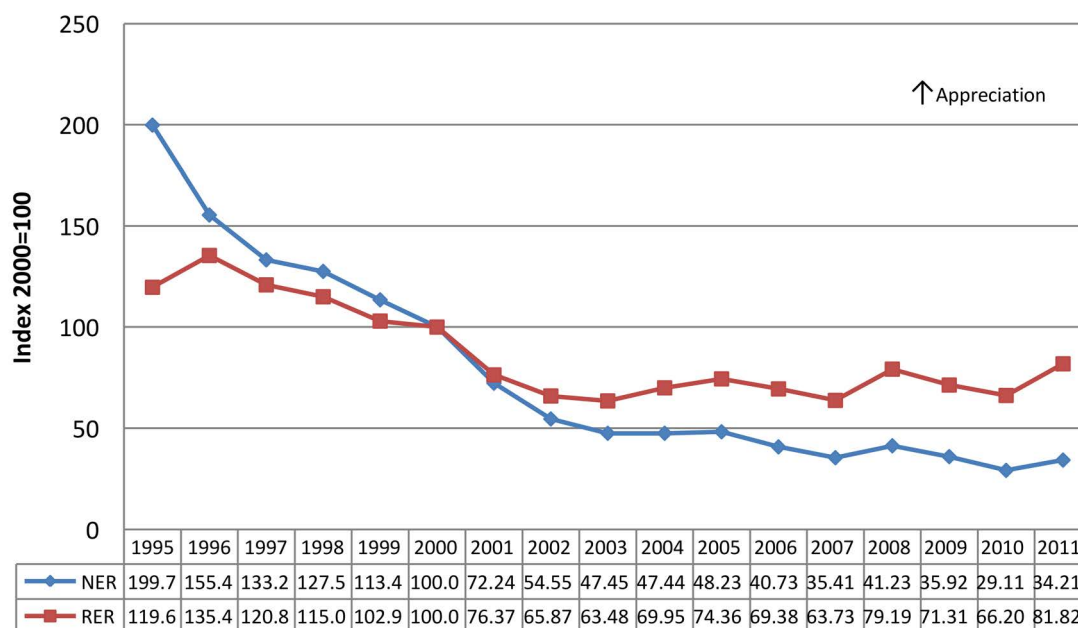


Source: IMF



Trends in the nominal bilateral euro/metical exchange rate, pictured in Figure 3, indicate a sizable depreciation of the metical against the euro throughout the 1995 to August 2011 period. In just the years from 2000 to 2011, the nominal euro/metical rate depreciated by 66 percentage points. Most of this depreciation occurred in the 2000-07 period. Since that point, the nominal euro/metical rate depreciated only about an additional 3 percent. The real, inflation-adjusted bilateral euro/metical rate also indicates continuous depreciation over most of the period; however the rate of depreciation has been much less steep due to differential rates of inflation in the EU and Mozambique. Real depreciation of the metical against the euro since 2000 has been about 18 percent. There has been some significant volatility during the decade with a large real depreciation of 36 percentage points in the 2000-03 period, a long period of gradual real appreciation thereafter of about 25 percent, and then a substantial appreciation in the first eight months of 2011 of 23 percentage points.

FIGURE 3: BILATERAL NOMINAL AND REAL EXCHANGE RATES: EURO/METICAL



Source: IMF

1.2. EFFECTIVE EXCHANGE RATES

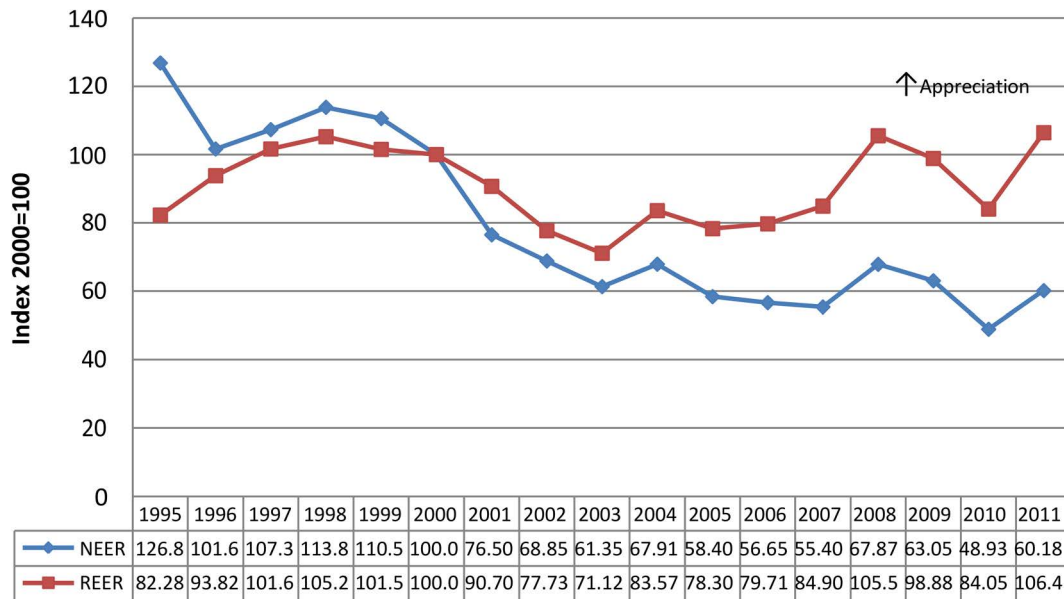
Bilateral movements in exchange rates can be misleading indicators of the overall change in the metical's value, therefore, in Figure 4, we present nominal effective and the real effective exchange rates for the years 1995-August 2011, calculated using IMF methods (Alessandro and Desruelle 1997)¹. The differences in the trade weights applied to these countries in the pre-2006 years. After 2006, the indexes of the two institutions, as one can observe in Figure 5, track quite closely at a correlation of about .95.

However, because applicable CPI's are used to adjust for differences in inflation in each country and the CPI (Center for Investment Promotion) includes prices of non-tradables, the real effective exchange rate index in this case is not a perfect measure of price competitiveness of tradables. Other deflators could be used to develop a more appropriate competitiveness measure, such as unit labor costs, but data for these deflators are not available for Mozambique.

¹ Effective exchange rate indexes based on IMF data are used for the analysis in this study rather than indexes based on data from the Bank of Mozambique for several reasons. First, BOM data were not available to the author going back to the years before 2000. Second, as Figure 5 below shows, the Bank of Mozambique's real effective exchange rate index trends a bit differently than the IMF's index, particularly in the years prior to 2006. This difference does not reflect differences in methods used in calculating the indexes in each case, rather it reflects some differences in the trading partner countries included in the calculations in particular years and nominal effective exchange rate index is an average of the bilateral nominal exchange rates between Mozambique and each of its trading partners, weighted by the respective trade shares of each partner, and therefore represents a much broader measure of movements in the metical in relation to global markets. In recent years, Mozambique's major trading partners have expanded from the traditional –big three– EU, South Africa, and the USA, to include China and India. However, the high trade weights with EU and South Africa continues – EU (55.7 percent) and South Africa (36.3 percent), while China (3.2 percent), India (2.6 percent) and the USA (2.2 percent) make up the remaining portion of the total. The real effective exchange rate index adjusts the nominal effective rate for differing rates of inflation in trading partner countries, employing relevant CPI measures. As the real effective exchange rate is a relative price index, measuring price changes in Mozambique versus its major trading partners, it is generally used as a measure of price competitiveness.

In addition, the real exchange rate can also be thought of as a ratio of tradable to non-tradable prices in the economy. The nominal effective rate shown in Figure 4 indicates a significant depreciation in the metical against all its major trading partners over the whole period of more than 50 percent. Just since 2000 alone, the nominal metical has depreciated by 40 percent. In addition, the nominal effective rate has experienced substantial volatility over the period – a 45 percent depreciation 2000-07, a 23 percent appreciation in 2007-08, a 28 percent depreciation 2008-09, and finally a 23 percent appreciation again in 2010-August 2011. The real effective rate has exhibited a good deal of volatility as well, particularly since 2000. Focusing on the last decade, one can observe that, after a significant real depreciation of 30 percentage points against its major trading partners in 2000-03, the metical tended to lose competitiveness for the rest of the decade, appreciating by almost 50 percent up to August 2011, with the exception of a 15-percentage point depreciation in 2010. A good part of this decline in competitiveness appears to be due to much higher rates of inflation in Mozambique compared with its major trading partners. However, taking the decade as a whole, the real effective exchange rate, despite significant volatility, ended up only slightly appreciated (6.4 percent) above where it began in 2000.

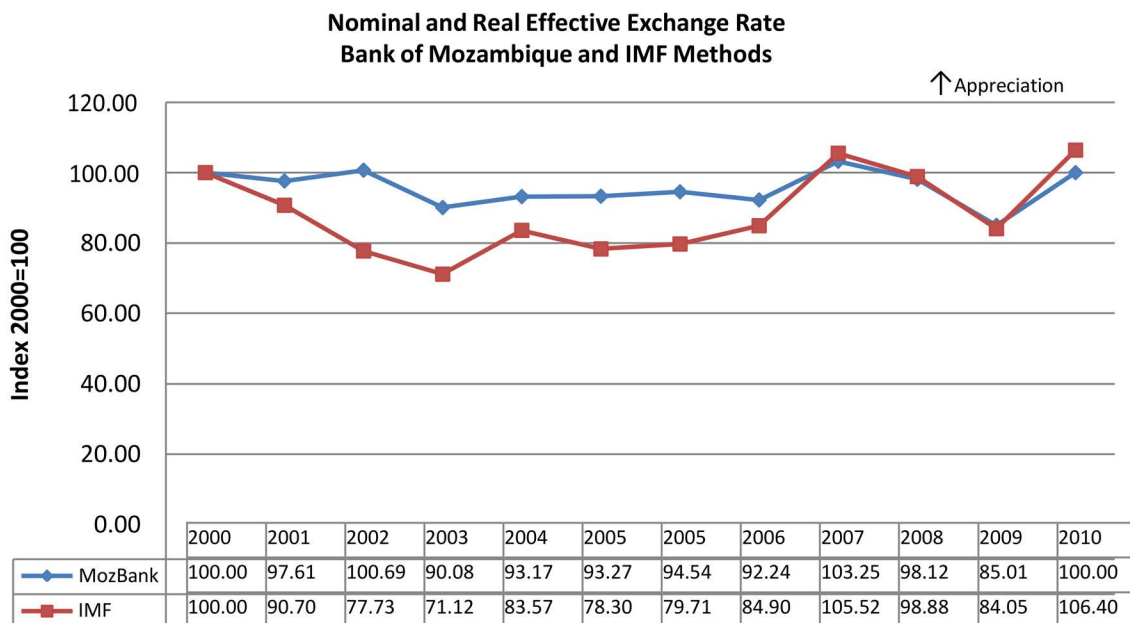
FIGURE 4: NOMINAL AND REAL EFFECTIVE EXCHANGE RATES (IMF)



Source: IMF



FIGURE 5: NOMINAL AND REAL EFFECTIVE EXCHANGE RATES (BANK OF MOZAMBIQUE AND IMF)



Source: IMF, Bank of Mozambique

1.3. VOLATILITY

A striking feature of metical exchange rate movements highlighted in this review of the 1995-2011 period has been persistent volatility. Figure 6 and Table 1 present a picture of Mozambique's real exchange rate volatility, employing the most widely used measure for calculating exchange rate volatility – the standard deviation of the first difference of logarithms of the exchange rate (Clark, Tamira, and Wei 2004). While exchange rates are often volatile, the extent to which they become a source of uncertainty and risk is a function of whether fluctuations are expected. When individuals can hedge, this predicted part of volatility can be removed and thus may not have much of an effect on economic decisions. The standard deviation of the first difference of logarithms measure we use has the property that it will equal zero if the exchange rate follows a constant trend, which presumably could be anticipated and therefore would not be a source of uncertainty. We compute the change in the exchange rate over one month, using end-of-month data. The standard deviation is then averaged over a one-year period, as an indicator of short-run volatility, which is plotted in Figure 6 and shown in the first half of Table 1. We also average volatility over a three-year period to capture longer-run volatility, which is shown in the second half of Table 1. All the volatility estimates are for the real effective exchange rate for the period 2000-11.

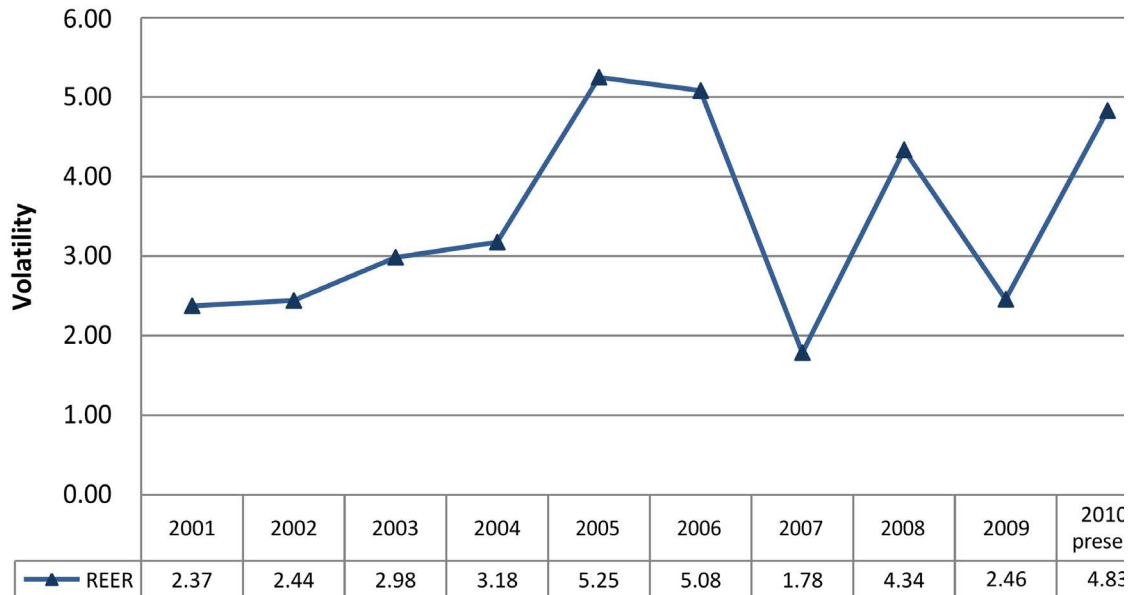
Estimates in Table 1 and Figure 6 indicate that average real exchange rate volatility is high in Mozambique. The long-run average standard deviation for the whole period is 3.9. In addition, volatility appears to have risen over the decade – increasing 40 percent, from an average volatility of 2.6 in the first half of the decade to 3.7 in the second half. To put these estimates in perspective, we can compare Mozambique with real exchange rate volatility measures for 150 countries shown in Clark, Tamira, and Wei for the period 1970-2002, computed using the same approach in this study. Mozambique's average real exchange rate volatility in such a comparison is shown to be almost twice as high as in advanced countries, where volatility averaged between 2 and 2.5 for the years 1970-2002.

Lower average exchange rate volatility is, of course, expected in advanced countries, as they have greater stability in economic policies and adjust more smoothly to shocks, given their more diversified economies. In addition, the foreign exchange markets in which advanced country currencies trade are large and liquid, with many instruments available to hedge volatility, helping these markets to clear quickly and reducing potentially large movements in exchange rates.

When benchmarked against exchange rate volatility in other developing countries, Mozambique compares more favorably, although it is still a bit on the high side. Developing countries as a group tend to have roughly twice the average volatility of advanced countries. However, the bottom group of countries (in terms of volatility) in the developing country cohort generally exhibited average volatilities of less than 3.0, while the top end of the cohort averaged around 5.0. Splitting up this developing country group a bit further, Mozambique appears to fit most naturally with a group of developing countries classified as non-fuel primary exporters, which exhibit the highest levels of average real exchange rate volatility across the world. In this developing country cohort, Mozambique's average exchange rate volatility ranks about in the middle. As a rule, these countries are small and subject to more frequent terms of trade shocks, owing to time-honored volatility in global commodity markets, which probably explains some of the higher volatility. Empirical research has found that swings in macroeconomic fundamentals, such as inflation and choice of foreign exchange regime, together with structural factors in financial and foreign exchange markets, have an important effect on the average levels of exchange rate volatility (Canales-Kriljenko and Habermeier 2004)².

² The structural factors in financial and foreign exchange markets, which are associated with lower exchange rate volatility, are (a) decentralized dealer markets (b) regulations on use of domestic currency by nonresidents (c) acceptance of Article VIII obligations and (d) limits on bank's foreign exchange positions

FIGURE 6: VOLATILITY OF REAL EFFECTIVE EXCHANGE RATE



Source: Author estimates based on IMF data

TABLE 1: VOLATILITY OF REAL EFFECTIVE EXCHANGE RATE

Year	Real Effective Exchange Rate
2001	2.37
2002	2.44
2003	2.98
2004	3.18
2005	5.25
2006	5.08
2007	1.78
2008	4.34
2009	2.46
2010-present	4.83
Period	Real Effective Exchange Rate
2001-2003	2.55
2004-2006	4.65
2007-2009	3.65
2010-Present	4.83

Source: Author estimates from IMF International Financial Statistics

1.4. ASSESSMENT OF EXCHANGE RATE MISALIGNMENT

The fluctuations in the real effective exchange rate index we have observed tell us something about trends in competitiveness over various time spans and about volatility, but they do not provide a benchmark for assessing the correctness of the exchange rate in terms of its real value or purchasing power. A currency is valuable because it buys goods. Therefore, the correct exchange rate (or the benchmark for assessing value) between two national currencies should be the one that equalizes their purchasing powers: That is, the hypothetical exchange rate that equalizes domestic and foreign prices of a basket of tradable goods and services. Any movement in the real exchange rate away from this equilibrium or purchasing power parity exchange rate³ may be considered a currency misalignment³. That said, not all deviations in the real effective exchange rate from purchasing power parity necessarily indicate fundamental misalignment. One important example is due to innovation in tradable goods sectors in advanced countries known as the Balassa-Samuelson effect, which elevates real exchange rates in advanced countries above those in less developed countries. Innovation in richer countries leads to higher productivity, which reduces production costs and prices of tradables and leads to higher wages in tradable sectors. Lower prices for tradables are then passed on to other countries through global competition. As there is less competition and innovation in non-tradable goods and services around the world, the prices of tradables will tend to decline over time relative to non-tradables. In addition, rising wages in tradables due to productivity improvements will pull up wages in non-tradable sectors as firms compete for workers. Rich countries with higher productivity growth and a large weight of non-tradables (e.g., housing) in consumption will thus have higher average CPIs relative to poorer countries. Put another way, as countries grow richer, relative prices of non-tradables tend to rise due to higher productivity in tradables. This price level effect will tend to appreciate the real effective exchange rate as incomes rise.

To assess whether Mozambique's real exchange rate is misaligned and by how much, we construct a time-varying index of real exchange rate undervaluation, based on purchasing power parity price-level measures in the Penn World Tables, following Rodrik (2008). The index is essentially a purchasing power parity real exchange rate adjusted for the Balassa-Samuelson effect. It captures the relative price of tradables to non-tradables in the economy, adjusting for the income effect on the relative prices of non-tradables. The computed index of undervaluation is shown in Figure 7 for the 1995-2011 period⁴. As constructed, when the undervaluation index is greater than one it indicates that the value of the currency is lower (more depreciated) than is indicated by purchasing-power parity and thus is undervalued; when the index is less than one the currency is overvalued. Table 2 presents 3-year averages for the exchange rate and undervaluation indexes, and shows the percent of undervaluation for each period (a negative sign indicates overvaluation). One can see from Figure 7 that the metical has been overvalued for most of the period. However, the degree of overvaluation has steadily declined. The last column of Table 2 shows that the degree of overvaluation has fallen from a high of 36 percent in the years 1997- 2000 to just 3 in 2010-2011. By 2007, in fact, the Mozambique's real exchange rate had reached purchasing power parity with the US dollar, as the undervaluation index equaled one in that year. Since then, the metical has moved in a range from about 10 percent overvalued to close to equilibrium in 2010⁵.

³ This is a simple straightforward way to estimate real exchange rate equilibrium. However, there are several other ways to go about measuring equilibrium and misalignment. The IMF now uses three notions of exchange rate equilibrium – the macro balance approach, the external sustainability approach, and the reduced form equilibrium real exchange rate approach. Both the macro balance and the external sustainability approaches measure the change in the exchange rate necessary to bring the current account back to its "norm," based on an other things being equal assumption. The current account norm in the macro balance case is derived via regressions of many variables on countries with similar characteristics as the country under review. The norm in the external sustainability approach is derived as a level that stabilizes the level of external indebtedness. The reduced form approach derives the equilibrium rate from estimated long-run (co-integrating) relationships

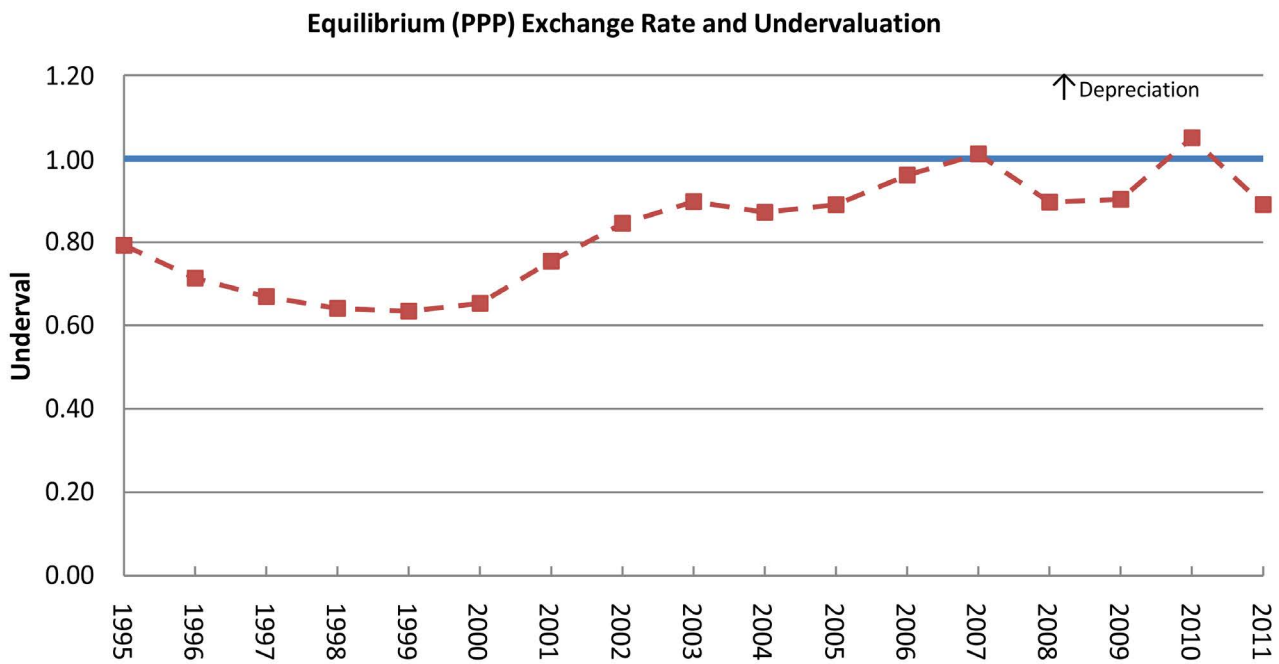
⁴ The equilibrium real exchange rate is computed as the nominal exchange rate (NER) divided by the purchasing power parity (PPP) index, measured as national currency units per US dollar.

$\ln(\text{RER}) = \ln(\text{NER}/\text{PPP})$. When RER is greater than 1, it indicates that the value of the currency is lower (more depreciated) than what is indicated by purchasing power parity. However, as non-traded goods are cheaper in poorer countries, an adjustment is required in the following way:

$\ln \text{RER} = a + b \ln (\text{GDP per capita}) + \text{time dummies} + \text{error}$. This provides an estimated RER adjusted for the Balassa- Samuelson effect. The difference between actual RER and this estimated purchasing power parity RER provides the measure of "undervaluation". If the Index is greater than 1, then the currency is undervalued.

⁵ It is interesting to noted that the IMF, in its June 2011 Country Report, reaches the same conclusion using its more complex three approaches method: macro balance , the external sustainability, and reduced form equilibrium real exchange rate approaches.

FIGURE 7: EQUILIBRIUM (PPP) EXCHANGE RATE AND UNDERVALUATION



Source: Penn World Tables (1995-2009); Economywatch.com (2010-2011)

TABLE 2: DEGREE OF UNDERVALUATION OF THE METICAL 1995-2011

	Nominal Exchange Rate Average Dollar/metical	Real Exchange PPP Rate Average	Undervaluation Index (Equilibrium PPP=1)	Undervaluation (%)
1995-1997	10.62	98.22	0.72	-28%
1997-2000	13.29	94.43	0.64	-36%
2001-2003	22.72	128.08	0.83	-17%
2004-2006	23.68	122.16	0.91	-9%
2007-2009	26.84	122.11	0.94	-6%
2010-Aug.2011	31.25	132.14	0.97	-3%

Source: Author calculations.

So far in 2011 the metical has move back toward overvaluation again – increasing the extent of over valuation by an estimated 11 percent, if we calculate the undervaluation index using the average exchange rate for the for the eight months through August 2011. Alternatively, if we were to use the actual exchange rate as of the end of August 2011 to compute the undervaluation index, the extent of overvaluation would be 39%. Considering the amount of volatility in the exchange rate, exhibited in Table 1, however, there is little reason to believe this large increase in overvaluation is a permanent trend.

A negative sign in the undervaluation column indicates overvaluation. The PPP real exchange rate is computed using IMF data up to 2009. Data for CPI and exchange rates for 2010 and 2011 are obtained from various country sources. The trade weights (fixed) are obtained from the Bank of Mozambique.

The levels and volatility of metical exchange rates we have observed over the 1995-2011 period can have important consequences for the economy.

We turn in the next sections of this study to a discussion of the major channels of transmission through which these exchange rate shocks influence economic outcomes, together with estimates of some of the main impacts.

2. EXCHANGE RATE FLUCTUATIONS AND PRICES

A key transmission channel through which exchange rate movements affect the economy is via their influence on prices. The principal direct effect occurs through the impact on import prices, which, via the pricing chain, triggers changes in consumer prices and producer costs. These price effects, in turn, generate indirect and second-round impacts by way of changes in real incomes, consumer spending, and trade flows, which have added consequences for the overall direction of changes in the consumer price index (CPI). The other direct effect of exchange rate changes on prices occurs via the impact on export prices, which leads to changes in exporter profit margins and trade volumes.

The crucial variable in understanding the magnitude of these exchange rate links to prices is the — exchange rate pass-through (ERPT) to prices at different stages of the pricing chain. The ERPT elasticity on the import side measures the degree of price transmission between foreign prices, exchange rates, and domestic prices, and thus provides valuable insights into the major determinants of consumer prices. On the export side, the ERPT elasticity measures the degree of price transmission between exchange rate changes and export prices, and thus can provide information on how exporting firms adjust margins according to business strategies in foreign markets.

Research on ERPT around the world shows that pass-through of exchange rate changes is not perfect (Ca'Zori and Schatz 2007; Campa and Goldberg 2005; Frankel Parsley and Wei 2005; ECB 2008). In developed countries, the ERPT to import prices averages around 60 to 70 percent. Import prices, however, are the first link in the pricing chain directly affected by exchange rate changes. Further down the pricing chain, the ERPT to final consumer prices gets progressively smaller in developed countries, averaging only between 13 and 30 percent (Campa and Goldberg 2006).

Several factors can cause this incomplete pass-through of exchange rate movements. First off, there is the effect of pricing behavior of major trading partners on import prices, which can reduce the pass-through elasticity by engaging in higher pricing-to-market behavior (i.e., absorbing more of any exchange rate fluctuations in their margins). Asian exporters did this following the Asian crisis in the late 1990's to increase trade flows. Second, some of the incomplete pass-through can be due to threshold effects. There can be thresholds to arbitraging behavior of market participants, whereby prices converge only if price differentials are above a certain threshold level that makes arbitrage profitable. More complete pass-through would be evident once thresholds of inaction are taken into consideration. Third, import price responses to exchange rate changes can be larger than consumer price responses because (a) there are non-tradables in the CPI, (b) distribution channel costs reduce the foreign content value of imports, and (c) imperfect competition in the distribution channel lets distributors adjust their profit margins to exchange rate changes in order to expand market share.

A study by Cirera and Nhate (2006) provides an estimate of the ERPT to domestic prices in Mozambique. Using Customs Authority data for 2000-05, this study examines price transmission in a pooled sample of 25 important products, across three regional provinces (Maputo, Beira, Nampula), spanning Mozambique. The consumer price of an imported product should be equal to FOB price adjusted to include insurance and freight (CIF price), plus tariffs and other border taxes, such as VAT, plus transport costs, plus a retail margin. As Mozambique is a small country, with limited ability to influence pricing-to-market behavior of foreign exporters (i.e., the FOB price), one would expect a high pass-through to import prices. Figure 7 shows movements in Mozambique's import price index along with nominal exchange rates over the

past 15 years. It is clear there is a close relationship. We confirm this tight correlation in a regression, which indicates an estimated pass-through to import price elasticity of .71⁶. The Cirera and Nhate study focuses on the next step in the pricing chain, ERPT transmission from border CIF prices of imports to consumer prices. They find that the transmission of exchange rate changes to consumer prices is also very high in Mozambique. There is almost complete pass-through. ERPT to retail consumer prices is upwards of 75 percent. Therefore, consumer prices appear to be highly responsive to exchange rate swings⁷. The Cirera and Nhate study also shows that this high price transmission is symmetrical. Exchange rate appreciations and depreciations are transmitted equally to consumer prices. Comparing the ERPT elasticity for appreciations and for depreciations indicates only a marginal difference – with the elasticity for appreciations being slightly larger at 1.05 times the elasticity for depreciations.

The fact that there is high pass-through of exchange rate changes to retail prices in Mozambique demonstrates that firms in the pricing channel for these imports generally have a constant mark-up of price over costs. Why do firms in more developed countries behave so differently than they do in Mozambique, resulting in a lower ERPT to consumer prices in advanced countries? The answer is that market structure in Mozambique is much different from that in most advanced countries. Import penetration in the Mozambican economy is very high⁸.

Imports play a large role in GDP – averaging in some years more than 30 percent of domestic value-added, and imports make up roughly a 25 percent share of total domestic demand. For some product categories, import penetration is much higher – penetration in manufacturing, for example, reaches nearly 60 percent of domestic demand. This enhances the pricing ability of foreign firms (as there is no incentive to defend these large foreign market shares through active pricing-to-market behavior) thus raising the ERPT to import prices. Second, local markets for these products in Mozambique also do not exhibit intense competition. In most cases, there are no, or very few, local substitutes, and there are only a few large firms competing in the distribution and retail segments of the pricing chain. Lastly, price mark-ups are passed-through to consumers who generally have rather inelastic demands for these basic imports.

The ERPT to export prices in Mozambique is generally expected to be lower than the ERPT to import prices. A practical indicator of the degree of pass-through in this case is the correlation coefficient between exchange rate fluctuations and changes in the export price index. Figure 8 shows a plot of the relationship between the real effective exchange rate and Mozambique's export price index for the period 1995-2009⁹.

In addition, we regressed the export price index on the real exchange rate to obtain an estimate of the elasticity of export prices to movements in the real exchange rate. One does observe some correlation between prices and exchange rates over the period in the figure. However, the statistical exercise finds the elasticity to be relatively low at .32 – the regression shows that movements in the real effective exchange rate explain only 16 percent of variation in export prices¹⁰.

⁶ Pass-through of exchange rates to import prices is estimated by the exchange rate elasticity of .71, according to the following regression.

Parameter		Standard	
Variable	DF	Estimate	Error t Value
Intercept	1	2.76409	0.30318-9.12
Log (exchange)	1	0.71246	0.10299-6.92
			Pr > t
			< .0001
			< .0001

⁷ Vicente (2007), using a co-integration approach and an associated error correction model on a small sample of monthly 2001-06 data in Mozambique, finds a much lower transmission effect. His study finds that a 1 percent exchange rate depreciation leads to a .15 increase in the price level. His study also finds that changes in South African prices and money supply swings are relatively more important than exchange rates in explaining domestic price variations. As Vicente notes, however, the difference in results in his study may, in part, be due to his small sample size and modeling strategy. Omar (2003) reports a pass-through elasticity for exchange rates to domestic prices in Mozambique that is more in line with the higher Cirera and Nhate results.

⁸ Import penetration is the share of imports in total domestic demand

⁹ Data for the export price index were not available for 2010 or 2011 when this study was carried out.

¹⁰ The REG Procedure

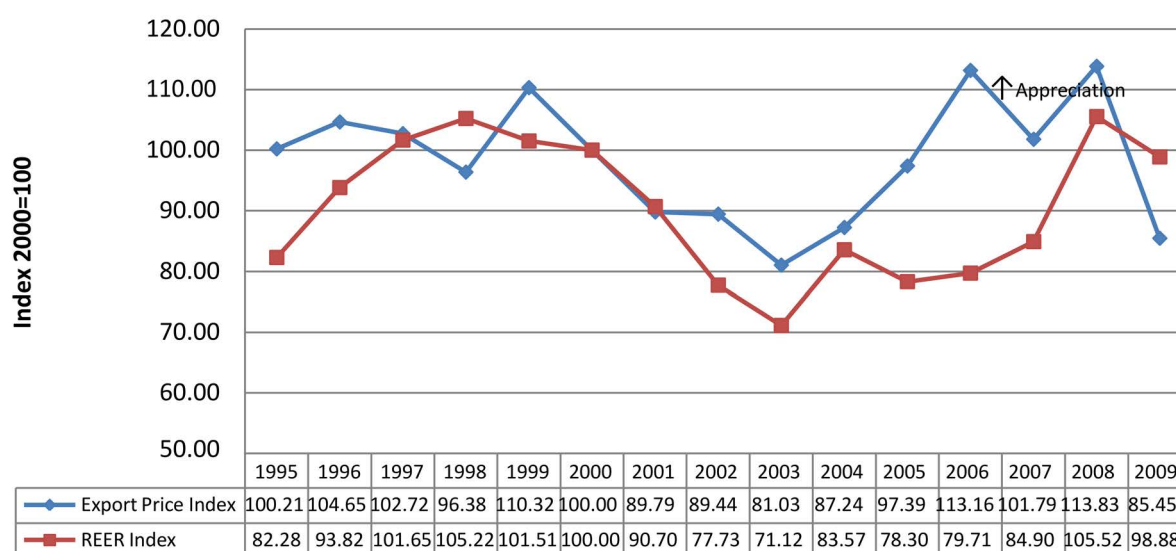
Model: MODEL1

Variable	DF	Parameter Estimate	Standard Error	t Value	pr > t
Intercept	1	3.13607	0.74730	4.20	0.0010
IREER	1	0.32285	0.16673	1.9	0.0749

So, only about one third of exchange rate shocks are passed-through to export prices in Mozambique. While this is a relatively low ERPT, the same experience of lower pass-through to export prices than to import prices is generally true of other countries, even in more advanced economies. In EU countries, for example, the ERPT to import prices averages around 70 percent, the ERPT to export prices is only 43 percent (ECB 2008).

The reasons for this difference in exchange rate pass-through revolve around the particulars of the composition of the export basket, competitive pressures in foreign markets, and exporter pricing-to-market behavior. The developed-country export basket, for example, is made up largely of manufactures where pricing-to-market behavior is most prevalent. Increased competitive pressures from emerging markets, such as China, have caused EU exporters to vary their mark-ups more and export prices less in response to exchange rate movements (ECB 2008). In the case of Mozambique, exports are limited in number and narrowly concentrated (World Bank CEM 2011). Only 14 products record exports of more than 1 million dollars. Exports from so-called — mega projects (aluminum, electricity, gas, and titanium) account for more than 79 percent of the export basket with 12 primary products making up the remaining 21 percent¹¹. Overall, exports also exhibit a low level of processing. The few products that might receive some further conversion, such as wood, cotton, oil seeds, and tobacco are exported at a very low stage of processing — for example, cotton is ginned in Mozambique, logs are milled to some degree, and cashews receive some processing. While Mozambique is a commodity exporter, where pricing-to-market behavior is generally less apparent than in manufacturing, its export basket exhibits several characteristics that reduce the degree of exchange rate pass-through to export prices.

FIGURE 8: REAL EFFECTIVE EXCHANGE RATE AND EXPORT PRICES



Source: IMF

Most important is the fact that mega-project export prices are not very sensitive to exchange rates. The multinational companies involved in this trade generally negotiate fixed-term contracts in foreign currency, based on commodity prices determined in world markets. For example, the majority of electricity exports involve long-term contracts that usually do not allow for large price fluctuations. In the cases of aluminum, coal, and minerals, export prices are also subject to long-term contracts that typically take the form of a fixed market price with a negotiated standard escalation (Bucuane and Mulder 2007). Prices of all these commodities are expected to increase over time with developments in emerging markets, but in an orderly fashion. For the remaining products in the export basket, the ERPT should be somewhat higher. However, relatively small Mozambican primary product exporters, with limited ability to hedge, are sometimes compelled to engage in pricing-to-market behavior, according to interview respondents for this study. Mozambique's export penetration in major markets is low and exporters face stiff competition and rigid contracts. Exporters also have a bit of leeway to behave strategically in some export destinations in the form of trade-preferences.

¹¹ The remaining 21 percent of exports are composed of (in order of rank in value exported) Tobacco, sugar, frozen shrimp, cotton, wood, cashew nuts, sesame seeds, bananas, coconut oil, tea, maize

The EU, for example, offers unilateral tariff preferences to Mozambique's exports, which provides some cushion in margins for strategic behavior. In their study of preferential tariff pass-through to Mozambique export prices in EU markets, Alfieri and Cirera (2008) provide evidence of exporter willingness to reduce margins to defend markets. When, for one reason or another, exporters cannot obtain proper documentation to enter the EU under available special tariff preferences, rather than renege on contracts, Alfieri and Cirera note that exporters enter at higher tariff levels, absorbing losses in their margins¹².

3. EXCHANGE RATES AND TRADE FLOWS

A second key transmission channel through which exchange rates influence economic activity is via expenditure-switching effects on trade flows. Exchange rate appreciations, for example, make a country's goods and services more expensive relative to foreign goods and services. This, in turn, leads to a shift in global demand away from the country's goods and towards foreign goods.

Consequently, the country's exports decline and imports increase, and there is a resulting deterioration in the trade balance and a decline in the contribution of net trade to GDP growth.

A crucial element in this scenario, however, is the ERPT. The overall effect of an exchange rate change on trade flows is highly dependent on the magnitude of ERPT to import and export prices. It is only when a nominal change in exchange rates turns into a realized change in import and export prices in the buyer's currency that a demand response will occur. To the extent that Mozambique exporters engage in pricing-to-market behavior, reducing margins in response to an appreciation and maintaining export prices, or to the extent that mega-export contracts are of long duration with price escalation clauses, the export response to appreciation will be restrained. On the demand side, by contrast, it is clear that expenditure switching or demand responses in foreign markets to any price-related effects of exchange rates on Mozambique's primary exports will be substantial. When the substitutability between products and suppliers is high (as in the case of most of Mozambique's primary agricultural exports), changes in relative prices between products from different source countries generally result in a pronounced demand response to exchange rate swings.

In addition to price-related effects, other factors can be expected to have an important impact on the supply response of trade flows to exchange rate changes. One is —sunk trading costs. These are the costs of entering a new market, which cannot be recouped in the event an exporter must exit the market at a later date. Examples are initial marketing expenses and costs of establishing a distribution network. These sunk costs introduce a degree of slowness in the responsiveness of trade flows. Without them exchange rate movements would not present a problem for incumbent, or newly entering, exporters, as they could react to changes with no loss in initial investment. For example, in the presence of sunk costs, incumbent exporters may not immediately react to a deterioration in profit margins after an exchange rate appreciation in order to protect the value of sunk investments. And new entrants might choose to delay entry into export markets a bit longer to ensure that the exchange rate moves in their favor, as initial outlays could be squandered. In Mozambique, exporters complain that sunk trading costs are high. Local fixed costs of exporters, in the form of initial investments in acquiring land, dealing with the bureaucracy, getting infrastructure up and running, establishing local trade facilitation networks with transportation, ports, customs, and so on, are considerable. And foreign fixed costs of establishing trading relationships and establishing distribution channels add to these totals.

According to exporters, these high sunk trading costs introduce a good deal of inertia into the export response to exchange rate changes.

¹² This study also shows that preference margins in EU markets are unable to explain most of the variance in Mozambique's export price margins in EU markets, suggesting, among other things, that exporter pricing-to-market behavior is an important factor in determining these price margins

Another factor that may influence the exchange rate elasticity of aggregate trade flows is the import content of exports. When domestic value-added is low, and imported inputs play a large role in export production, the impact, for example, of an appreciation on the foreign currency price of exports, is lessened, as the price of imported inputs falls. This mitigating effect of imports may be important in shaping the export response in Mozambique, as the import content of some important exports is sizeable. Exporters note that most export companies are — green field investors, lacking the support of key suppliers in almost every area — capital equipment, intermediate inputs, packaging, technical expertise, spare parts, and so on. All these critical inputs have to be imported.

A further potential mitigating factor for supply response revolves around hedging. To the extent Mozambique's exporters can hedge exchange rate exposure, they can reduce the supply response to any adverse movements in exchange rates. However, as noted earlier, the ability to hedge in Mozambique is somewhat limited, given the level of financial development. To hedge foreign exchange exposure exporters have the following narrow options available. For exporters that can afford the fees and other costs, large banks in Mozambique offer three hedging products: forward foreign exchange contracts (for imports and exports), funded forward foreign exchange contracts, and foreign exchange swaps. To date banks in Mozambique do not deal in foreign exchange options because of the cost (or premium) that would be charged to the client owing to the absence of an active interbank financial derivatives market¹³. For smaller exporters that cannot, or will not, pay the costs of such products, the options available are to reduce foreign exchange exposure as much as possible, hold different types of foreign exchange in their accounts, or speculate in the local foreign exchange market through banks or exchange bureaus.

Lastly, the business environment is an important factor in shaping the exchange rate-trade flow link. Mozambique's rank in the World Bank's —Doing Business Report has improved somewhat in the last couple of years, but it continues to be positioned near the bottom of the list of countries with poor business climates (World Bank 2011). Its global competitiveness index, as measured by the World Economic Forum, also languishes around the lower rungs of the competitiveness ladder compared with its peers (World Economic Forum 2010). Financial constraints register as one of the worst elements in this lackluster business environment, and, according to the 2011 Doing Business Report, this feature of the business climate has actually deteriorated in the past few years.

Firms complain in surveys that both cost and availability of credit are problems (World Bank Investment Climate Survey 2009). A number of studies on other developing countries have found that these business environment problems, particularly financial constraints, reduce the exchange rate elasticity of trade flows (see Colacelli 2010 for a recent review of some of these studies).

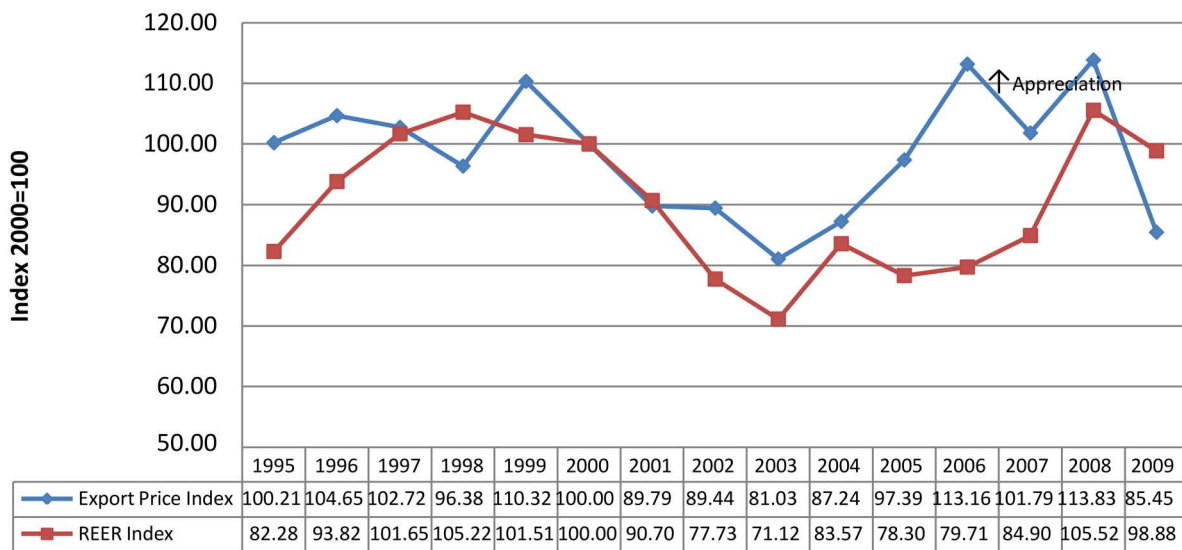
Estimates of the exchange rate elasticity of trade flows have been carried out for a number of developed and developing countries at least since the 1950s. This work has been at the center of a long debate about how sensitive exports are to real exchange rate changes. Views have swung from — elasticity pessimism in the 1950s and 1960s, particularly for developing countries, to a more sanguine stance on the ability of changes in the real exchange rate to improve the trade balance (Ghei and Pritchett 1999; Reinhart 1994). Much of this debate has been driven by improvements in estimation techniques and in computing power through the years. A recent study by Colacelli (2010) improves on the results by focusing on bilateral exchange rates, on a larger sample of countries, and on a wider number of sectors. Colacelli examines the export response to real exchange rate fluctuations in a sample of 136 countries, during the 1980s and 1990s, for 440 sectors. Given this large and in depth sample, the investigation has the ability look at exchange rate elasticity in both developed and developing countries, as well as in separate product groups.

¹³ A foreign exchange forward contract is a contract to exchange two currencies at a future date at an agreed rate. These forward contracts are used, among other things, for hedging forward foreign exchange exposure for known or likely future currency receivables and payments. A funded forward is the same as a forward contract but it involves bank funding along with it. A foreign exchange swap is a contract under which two counterparties agree to exchange two currencies at a set rate and then to re-exchange those currencies at an agreed upon rate at a fixed date in the future. A foreign exchange option is an option to enter into a currency contract sometime in the future.

The study finds that the elasticity of export response to real exchange rate changes of an average exporter in a developed country is .67, while the elasticity in developing countries is .13. These results are broadly consistent with other estimates of close to one for developed countries (for example, the average elasticity for EU countries is found to be .80, ECB 2010) and well below one for developing countries. Colacelli also finds that there are significant sectoral differences in the export response. Overall, exports of differentiated product sectors (such as manufactures) are found to respond more to real exchange rate swings than those of homogeneous products (such as commodities). This would explain some of the difference in the exchange rate response elasticity between developed and developing countries, as the export mix in developing countries is generally heavily concentrated in primary products. But the study also finds that the differences in response elasticity between product groups in developing countries are quite small; so export composition does not explain as much as one would expect. Colacelli's conjecture, supported by research in other countries, is that this lower export response to exchange rate fluctuations in developing countries is due importantly to credit constraints.

Considering Mozambique's low ERPT to export prices and obstacles in the business environment, one might expect the export response to exchange rate changes to be restrained. To examine this issue, we present a graph of the real effective exchange rate along with indexes of Mozambique's aggregate exports by volume and by value for the years 1995-2009 in Figure 9. One does not observe much of an association in the figure between exchange rate movements and the export indexes largely due to the exponential rise in the export value index, which rose from 100 in 2000 to 728 in 2008 blowing out the y-axis of the graph.

FIGURE 9: REAL EFFECTIVE EXCHANGE RATE AND EXPORT VALUE INDEX, EXPORT VOLUME INDEX



Source: IMF

To take a closer look at the trade elasticities in this case, we estimate an export supply function using annual data on trade flows for the period 1990-2010. A priori, exports should be determined by global purchasing power and by relative price competitiveness. Thus, we estimate the following export supply equations, one with export volumes as the dependent variable and the second with export unit values as the dependent variable:

$$X_t = \alpha + \beta_1 GDP_t^w + \beta_2 REER_t + \varepsilon_t$$

=

$$\frac{X_t^v}{P_t^x} = \alpha + \beta_1 GDP_t^w + \beta_2 REER_t + \varepsilon_t$$

$$\frac{X_t^v}{P_t^x}$$

Where X_t is the export volume index and $\frac{X_t^v}{P_t^x}$ is the export unit values (the numerator is the export value index and the denominator is the export price index); α is a constant term, is world purchasing power, proxied by the real trade-weighted average GDP of Mozambique's major trading partners; REER_t is the real effective exchange rate, as computed in section 1, and ϵ_t is an error term. All variables are in logs. One expects β_1 to be positive and β_2 to be negative in the estimated export supply equation.

Since we are dealing with time series, we checked our data for stationarity using the Augmented Dickey-Fuller (ADF) unit-root tests and found the log of all variables to be non-stationary, specifically to be I(1). Results from the bivariate analysis of the export volume equation indicate that foreign purchasing power and the real exchange rate are both significant and have the correct signs. The equation has an adjusted R² of .96. The global income effect is shown to have a pronounced influence on export supply with a positive coefficient of 8.62. The responsiveness of export volumes of goods to exchange rate changes is indicated by an elasticity of -0.83¹⁴. Thus, a 10 percent sustained depreciation (appreciation) in the real effective exchange rate will result in an 8 percent increase (decrease) in export volumes. One shortcoming of the single equation model used above is the assumption of instantaneous response of trade flows to the variables in the system. Typically, however, the export response to a 10 percent sustained movement in the real exchange rate will occur after a considerable lag. To estimate this lag in response, however, would require more time-series observations than we have available.

We know from previous research on trade elasticities that our estimate of the short-run export supply response to exchange rate changes is probably biased downward to some degree because of aggregation bias, simultaneity bias, lags, and other factors (Goldstein and Khan (1985)). Hence, it is conceivable that one might reveal a higher elasticity if additional data were available to deal with such estimation issues. Our estimated elasticity of export supply is somewhat lower than the elasticity used by the IMF in its calculations of the macro-balance approach to exchange rate valuation in Mozambique (see IMF Staff Report June 2011). The IMF's export supply elasticity estimate for Mozambique is -1.17 for the 2001-04 period (see Tokarick 2010).

This estimate, however, is not derived using econometric techniques. It is calculated from a procedure that uses a standard general equilibrium model of international trade and data from The Global Trade Analysis Project for the years 2001 and 2004.

Given these different estimation approaches, it is difficult to compare the two estimates side-by-side. On balance, though, both estimates do show that the short-run response of trade volumes to real exchange rate fluctuations is substantial.

Estimation of the export unit value equation above did not find a significant export supply elasticity. The foreign purchasing power effect was found to be highly significant, with a coefficient of 7.4, but, while the elasticity of response to exchange rate fluctuations had the correct sign, it was not significant (significant only at the 85 percent level).

Figure 10 shows a plot of disaggregated trade flows, classified by mega and non-mega exports, together with the real effective exchange rate. To investigate whether the elasticity of export supply might differ within these two categories of exports, as suggested earlier, we estimated export supply equations for each cohort as specified for total exports above. Unfortunately, disaggregated data is only available for mega and non-mega export values, so we were unable to estimate export volume equations for each category, which seem to provide a better fit. The results show that, for both mega and non-mega exports, global purchasing power is highly significant, but the exchange rate effect on export unit values has the wrong sign and is not significant (see Appendix I for results).

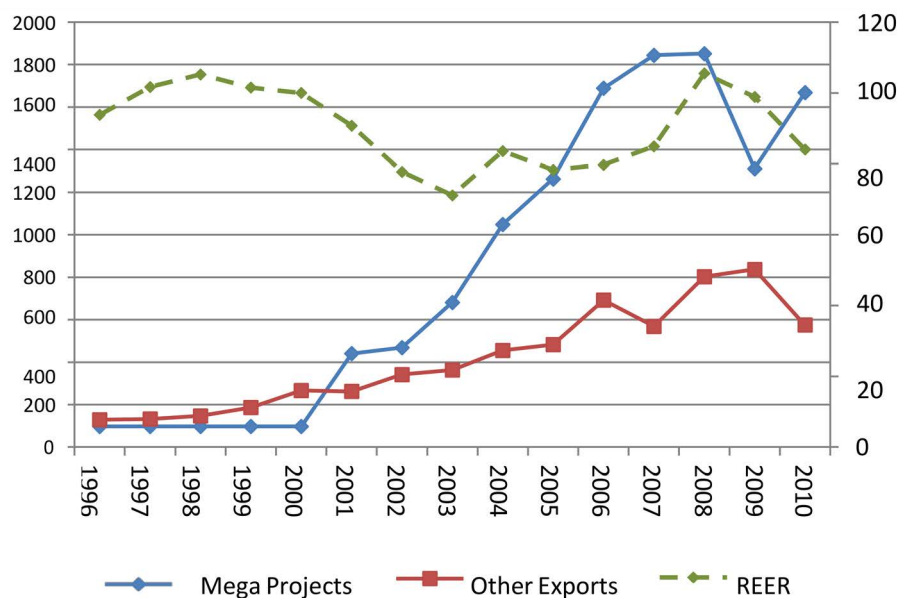
14

Parameter Estimates					
Variable	Degrees of Freedom	Parameter Estimate	Standard Error	t - value	Pr > t
Intercept	1	242.48994	14.0627	-17.24	<.0001
lwtgdp	1	8.61677	0.45703	18.85	<.0001
lreer	1	-0.83373	0.36125	-2.31	0.0338

Hence, we are unable to provide support for the conjecture that mega exports are less sensitive to exchange rate fluctuations than exports in the non-mega cohort. Part of the problem here is that we are forced to deflate mega and non-mega export values by the CPI rather than the export price index for each series, as separate export price indexes for mega and non-mega exports are not available. This injects added noise into the data producing poor quality results.

To gain additional insights into the relationship between exchange rates and trade, we disaggregated Mozambique's export data further to look at individual commodities within the non-mega cohort. Fortunately, enough time-series data were available for cotton exports to facilitate this exercise. We estimated export supply equations for cotton using both export volume and export value data. Results for the export volumes specification show that global incomes and the real effective exchange rate explain about 75 percent of the variance in cotton exports. In addition, both foreign purchasing power and the real exchange rate are significant at the 95 percent level¹⁵.

FIGURE 10: MEGA PROJECT EXPORTS, OTHER EXPORTS AND REAL EFFECTIVE EXCHANGE RATE



Source: IMF

The elasticity of response of cotton export volumes to changes in the real exchange rate is found to be -1.30, indicating that the impact of exchange rate fluctuations on cotton export volumes is sizeable. The export value specification of the cotton export equation indicates that global income is important and significant, but, while the response to exchange rate changes has the correct sign, it is not significant (significant only at 80 percent level). Unfortunately, we did not have enough data on other non-mega exports, such as tobacco and cashew, to explore additional export elasticity estimates.

Finally, we examined the impact of exchange rates on import demand. A priori, imports should be explained by national income, exchange rates, and prevailing trade policies. Data are available only on import values; hence we estimated the following import demand equation

$$\frac{M_t^v}{P_t^m} = \alpha + \beta_1 GDP_t^m + \beta_2 REER_t + \varepsilon_t$$

Where $\frac{M_t^v}{P_t^m}$ is import unit values (import value index divided by the import price index); α is a constant term; GDP_t^m is domestic real GDP, $REER_t$ is the real effective exchange rate; and ε_t is an error term. The results

demonstrate that the level of domestic real GDP has a pronounced impact on import demand – the estimated elasticity is .92 and is significant at the 99 percent level. The effect of the real exchange rate, however, is shown to have the wrong sign and is not significant¹⁵. The results of this exercise are surely influenced by the fact that we did not have a measure of prevailing trade policy that we could use as a control variable in the regression.

Another possible effect of exchange rates on trade flows stems from exchange rate volatility. Risk averse exporters could be adversely affected by volatility, particularly in the absence of hedging mechanisms, and this may have consequences for trade. Overall, the consensus of most of the research on the subject of exchange rate volatility and trade is that there is at most a weak negative effect of volatility on aggregate trade flows (Mckenzie 1999; Clark, Tamirisa, and Wei 2004; Darby and MacDonald 2008). Where volatility has, its greatest impact appears to be on the composition of trade – even when aggregate trade flows remain relatively stable, or decline slightly, in the face of high exchange rate volatility, the export basket can change meaningfully.

Raddatz (2011) examined the impact of exchange rate volatility on the structure of trade in 129 countries using detailed product data. She found that exchange rate volatility matters relatively more for products that lack a natural hedge and are therefore more exposed to volatility. A natural hedge against exchange rate volatility, which is provided by a negative correlation between a product's international price and the country's nominal exchange rate, is shown to influence a country's export patterns, even after controlling for other standard determinants of export composition, such as factor content of trade and export patterns of countries with similar levels of income. The reason for this outcome is that products and sectors with international prices that are negatively correlated with the country's exchange rate have relatively more stable prices in local currency than do other products and sectors. Given that fluctuations in local currency prices matter for incentives for trade and resource allocation, these goods should become relatively more important in the country's export basket following sustained periods of exchange rate volatility.

Thus, the fact that Mozambique exhibits high exchange rate volatility could be having some impact on the country's export composition. Unfortunately, we did not have the detailed data available to look into this issue.

4. EXCHANGE RATES AND ENTERPRISE PROFITS

In this section, we turn to a microeconomic examination of the impact of exchange rates, with a shift of focus to firm performance. Exchange rate changes can affect the profitability of firms in a number of ways. First, appreciations (depreciations) can result in a loss (gain) of international price competitiveness. Export volumes and export earnings are apt to fall (rise) as a result. Any decline in profitability due to, for example, an appreciation may be offset to some degree by two factors: (a) exporter pricing-to-market behavior: an exporter may decide strategically to absorb a portion of the exchange rate change in margins per unit of exports (reducing export price in domestic currency), thereby avoiding a fall off in export volumes, and (b) a decrease in cost of imported inputs following appreciation. Second, profitability of firms not directly engaged in international transactions, such as firms active in import substitution operations, can be affected by exchange rate changes through competition in domestic markets from changing import prices. Third, exchange rate fluctuations can affect firm profitability through shifts in the valuation of assets and liabilities on the company's balance sheet. The size of this valuation effect will depend on the firm's foreign exchange exposure – i.e., the value of holdings in asset portfolios and loans in foreign currency. Firms may decide to remove a portion of their foreign exchange exposure, and reduce the possibility of valuation and other exchange rate impacts, through various forms of hedging.

In sum, the impact of exchange rate fluctuations on firm profits depends on (a) the extent to which a firm is involved in trade, either in terms of exports or imports, (b) the competitive environment within which a firm operates, and (c) the extent of foreign exchange exposure of a firm's balance sheet. In international markets, it influences pricing-to-market behavior. In domestic markets, any positive impact of an exchange rate shock, for example declining imported-input prices owing to an appreciation, might have to be passed on to consumers.

¹⁵ See Appendix I for regression results

In the end, the link between firm profits and exchange rate changes is largely an empirical issue, as it is difficult to say in advance what the final outcome will be in all cases, as it depends on the characteristics of the firm and its products, as well as the nature of competition. One empirical study on a large sample of developed and developing countries, using stock market earnings data, found that exchange rate movements do not matter much for the value of industries (Griffin and Stulz 2001). This was especially true for the US economy where exchange rates seem to have a very low impact on firm earnings. A more recent investigation by the European Central Bank (2010) finds a more substantial impact. It examined exchange rate shocks in six industrialized countries, using earnings data of listed companies and classifying these companies by the extent of their international sales. The ECB found that (a) most of the time exchange rate changes have a positive effect on earnings of non-exporters, but the impact is relatively small, suggesting that the sourcing-imported-inputs effects of exchange rate movements generally out-weigh competition effects for non-export companies, (b) for exporters, competition effects out-weigh sourcing effects, indicating that appreciations reduce exporter earnings, (c) firms with above-average export sales are not necessarily affected to a larger degree by exchange rate changes, suggesting that these larger multinationals can find ways to manage their way around, or hedge, exchange rate exposure.

Exchange rate volatility can also influence firm earnings, causing substantial swings in profitability in some cases. The impact of exchange rate volatility on profits depends on how exchange rate volatility correlates with a firm's product price and costs, as we noted earlier. Some firms export products whose international price co-moves negatively with nominal exchange rate fluctuations. As a consequence, the prices of their products in local currency are more stable than the product prices other firms, so their profits do not fluctuate as much with exchange rate movements. These firms, as we noted above, have a natural hedge against nominal exchange rate volatility. For other firms that are more exposed to volatility, the oscillation of prices and profits matters, particularly in developing countries where financial markets are less developed. In these low-income countries, swings in relative prices and profitability can cause difficulties in capital markets, as there is limited ability to bear this type of elevated risk. The result can be underinvestment in the activities of these firms and resource shifts toward products and firms with less volatile profits (Hausmann and Rigobon 2003; Raddatz 2011).

Mozambique does not have detailed time-series data on firm earnings in various industries to examine the microeconomic impacts of exchange rate shocks. What we can do, however, is look at examples in a few sectors to get some idea of the direction and magnitude of possible effects.

4.1. AGRICULTURE

Turning first to agriculture, an important issue for entrepreneurs and firms making investment decisions is how exchange rate shocks affect relative producer price incentives between sectors, such as agriculture and industry. A central tenant of economic policy in developing countries has been to — get prices right so that investment decisions are not distorted. Trade and macroeconomic policies in many developing countries are often viewed as having negative effects on relative producer price incentives in agriculture verses industry, hindering development of the agriculture sector (Krueger, Schiff, and Valdés, 1988). The common policy prescription for this problem is to reduce these distortions to improve agricultural price incentives for investors. A key element in this cure is to remove any overvaluation in exchange rates, as appreciation is seen as an important negative for investment in tradable agricultural goods¹⁷. So what can be said about the importance of exchange rate effects for relative price incentives in Mozambique?

¹⁷ As Jensen et. al. argue, the assumption of tradability is quite important. The earlier research on bias in agricultural price incentives assumed that domestic agricultural products and world market goods are perfect substitutes, and that essentially all agricultural goods are traded. This can lead to overstating the bias in agricultural price incentives, as we will see in Mozambique, since variation in agricultural tradability is crucial for the transmission from policy interventions to relative domestic price incentives.

Jensen, Robinson and Tarp (2002) address this question using general equilibrium models for 15 developing countries, including Mozambique. They find that changes in exchange rates in a general equilibrium system prove to be quite important for relative price incentives. However, exchange rates have differing impacts on relative agriculture price incentives depending on specific country characteristics. Differences in impact depend crucially on a country's relative trade shares between agriculture and industry and on the relative elasticity of import demand and export supply.

In Mozambique, trade shares of primary agriculture are low and there is a bias toward imports. Agriculture's use of imported inputs is also relatively low. Industry's trade shares, by contrast, are high, especially when mega projects are included, and industry's use of imported inputs is high. Accordingly, real appreciation of the metical would be expected to improve relative price incentives in agriculture and real depreciation to worsen them. Real appreciation generally works to lower the terms of trade for exports and lower input costs for sectors using imported inputs.

That is why in countries with large agricultural trade shares, the impact of terms-of-trade effects (often combined with trade protection) dominate import- cost effects, such that exchange rate appreciation generally worsens relative price incentives for the most intensively traded sector. In Mozambique, however, because of the low aggregate trade shares of primary agriculture, the impact of appreciation is just the opposite – imported-input cost effects dominate terms of trade effects, leading to improved relative agricultural price incentives (see Table 3).

TABLE 3: TRADE SHARES AND IMPORTED INPUTS

Product	Trade Shares (%)		Imported Inputs (%) *	
	Exports (a)	Imports (b)	Family F	Commercial F
Cassava	<1	0	15	17
Maize	12	11.5	15	30
Rice	<1	60	10	20
Wheat	<1	99	(na)	(na)
Cotton	98	0	14	16
Soybeans	<1	0	11	12
Cashew	65	0	12	22
Tobacco	90	0	(na)	(na)
Horticulture	<15	(na)	(na)	(na)
Manufactures	>70	(na)	(na)	60

Source: Arlindo and Keyser (2007); Donovan and Tastao (2010); GTZ/Technoserve 2010.

(a) Exports as a percentage of production; (b) Imports a percentage of consumption;

*Imported input costs for all stages of production (farm production, processing, assembly and logistics) as a % of final shipment value.

Family F = family farm and Commercial F = commercial farm; (na) not available.

However, this aggregate impact of exchange rates on relative agricultural price incentives conceals differences in outcome across specific products. Individual agricultural commodities differ significantly in their trade shares and use of imported inputs, consequently the impact of exchange rate changes on producer price incentives within agriculture differs product by product. Estimates of the differences in trade shares and imported input use for important agricultural product categories are presented in Table 3. Primary food crops, which dominate value-added in the sector, have low trade shares (although export shares vary somewhat year to year depending on prices) and imported input use differs depending on whether the staple crop is grown on a family or a commercial farm – on the whole, imported input costs are a relatively modest proportion of a family farm budget, while they play a more significant part in total costs of a commercial farm, as might be expected. As a result, the terms-of-trade effect of an appreciation tend to be small, while imported-input effects improve incentives, especially for commercial farms. Conversely, real exchange rate depreciation exacerbates relative price incentives.

Export crops, on the other hand, such as cotton, tobacco, and cashew, are shown in Table 3 to have much larger trade shares than staples. Accordingly, real exchange rate shocks should have a more substantial impact on the export terms of trade for these commodities. Real appreciation, in the case of these tradables, worsens relative producer price incentives and real depreciation improves them, as negative export terms-of-trade effects will dominate positive imported-input effects. We found support for this in section 3 in the case cotton exports. The response elasticity of cotton exports to real exchange rate changes is such that a 10 percent sustained depreciation (appreciation) will result in an estimated 13 percent increase (decrease) in cotton export volumes. In Mozambique, these tradable agricultural products provide the majority of cash income for rural smallholders who constitute the bulk of the population.

Therefore, any extended episode of real exchange rate appreciation can have adverse consequences for the cash incomes of a large segment of society, including the poorest segments of the populace who are part of this smallholder cohort.

For domestic import-substitution investments in staple foods, particularly in crops such as rice and wheat with large import shares in consumption, appreciation will tend to reduce producer price incentives, as competitive effects from falling import prices of these staples out-weight any positive effects from lower costs of imported inputs. The impact of exchange rate swings on the competitiveness of these investments is important because it influences Mozambique's ability to deal with rising world food prices, which is becoming an ever more pressing problem, considering the country's large requirements for imported staples to feed a low-income, growing population.

Import substitution will have to play an increasing role in meeting these food deficits in the future, and competitiveness of local production is key to accomplishing this objective. In the case of maize, the overall impact of declining import prices in the aftermath of an appreciation is somewhat more ambiguous, given its smaller import share and the relatively sizeable use of imported inputs, particularly on commercial farms. Additionally, VAT is levied on imports of maize, although large-scale processors who import and process for sale locally receive a VAT rebate (which is not costless in most cases, as according to interviews with processors there are often delays in repayment of VAT)¹⁸. Other aspects of trade policy also do not play much of a role in shaping exchange rate impacts on price incentives, as Mozambique has an open trade policy for staple foods.

An additional important point that needs to be stressed, in addition to the impact of exchange rates on import substitution, is that Mozambique today has very poor business conditions in agriculture – infrastructure, transportation, extension services, input suppliers and so on, are all important constraints to production improvement. This puts most import-substitution ventures in staple foods in a fragile position. For the most part, given such a poor business environment, these investments are only marginally competitive at present.

Rice import substitution is a good example. Rice is a staple food crop where increased import substitution could make an important difference. Rice is the third largest source of staple food calories in Mozambique behind cassava and maize and consumption is growing at the rate of about 18 percent per annum.

Currently somewhere around 60 percent of rice consumption is imported and these imports have been rising steadily as consumption growth outstrips sluggish local production. Domestic rice cultivation is centered in the most populous central and northern provinces of the country; so strategies to increase yields and improve competitiveness of production would not only improve food security but would also contribute to poverty alleviation. Ninety-seven percent of rice production is cultivated under rain-fed conditions and there is very limited use of improved seeds, fertilizers, and chemicals, so yields are some of the lowest in sub-Saharan Africa. In addition, about 15 percent of rice is lost post-harvest and high-cost transportation adds 30 to 40 percent to the consumer price. The 3 percent of farms that are in irrigated areas and use improved seed fare better with yields roughly three times higher. But, even under these improved, irrigated conditions, competitiveness of domestic rice production has traditionally been under pressure from cheap Asian imports.

¹⁸ Donovan and Tostao (2010) report, however, that this VAT rebate helps to give large processors a clear advantage over maize meal from small-scale processors, as the small-scale firms without a VAT rebate have to buy higher-cost maize from local suppliers, which increases substantially in price after the main marketing season.

- In 2006/07, the world market situation for rice changed and prices began to rise sharply – the price of a ton of Pakistani 25 percent broken white rice (generally what Mozambique imports) jumped from 230 dollars fob Pakistan in 2006 to 372 dollars in 2010, an increase of 62 percent (in 2008 the world price peaked at 498 dollars). Mozambique’s domestic rice prices have risen in tandem with this upsurge in world prices. This has spurred increased interest in the donor community and in the private sector in expanding domestic rice production, particularly in the country’s irrigated areas, and several large investments have been made¹⁹.
- The central question is, is the competitiveness of domestic rice production high enough to compete with imports in the wake of these world market price changes? In 2006, an agricultural supply-chain study showed that a ton of Asian white rice landed at Beira was 430 dollars CIF. Converted at the going 2006 exchange rate of 1 dollar = 25 meticals, this ton of imported rice was 10,825 meticals, while a competing domestic ton of rice, delivered to the same location, was 9,725 meticals, a local competitive margin of just 11 percent (Arlindo and Keyser 2007). Clearly, a margin this slim is not enough to induce much domestic investment in import substitution. Typical year-to-year exchange rate volatility in Mozambique shown in this study could wipe out any domestic profits – for example, an exchange appreciation from 25 to 22 meticals per dollar, would drive the margin of domestic rice into negative territory.
- This is why expert opinion at the time deemed intensive rice production an unlikely economic prospect in Mozambique (Walker et. al. 2006).
- Today, investors are hoping to use improved seeds, fertilizers, and agronomic methods to double yields in the country’s irrigated perimeters from 3 to 5 or 6 tons per hectare in order to raise profitability. Currently, the cost of a landed ton (Beira/Nacala) of 25 percent Pakistani broken white rice is 600 dollars, while the delivered cost of local rice from these new investments is roughly 500 dollars (including transportation and milling), a local competitive margin of 20 percent.
- This profit margin is realized with yields of 5 tons per hectare, according to local investors. It is clear that the higher yields of these new investments are increasing domestic competitive margins. However, considering the many uncertainties involved in such ventures, driven by the possibility of weather shocks, fluctuating yields (which, in addition to weather depend on getting quality inputs on time), and the ever-present volatility of metical exchange rates, risk-adjusted returns on rice import substitution continue to be quite slim, even though margins appear to be improving²⁰.

4.2. TOURISM

Tourism is a service-export sector where firms can be importantly affected by exchange rate shocks. The direction and magnitude of effects on relative investor price incentives in tourism, as in agriculture, will depend on export trade shares and on the relative elasticity of import demand and export supply.

Mozambique does not have a great deal in the way of available time-series data on tourism on which to base a detailed examination of exchange rate shocks, other than basic arrival data beginning in 2004. What we do have available, however, is a tourism value-chain study carried out by the International Finance Corporation of the World Bank in 2006. This study provides a detailed value-chain cost analysis for four basic travel itineraries for tourist visits to Mozambique.

¹⁹ Japanese and Chinese donors have provided funds for investments and Olam, a large private agricultural trading company from Singapore, has made a 35million dollar investment in rice production in the Central Mozambique province of Zambezia in the Tewe irrigation system

²⁰ Another example of the fragility of import substitution and the impact of exchange rate swings on competitiveness comes from poultry. Currently imported frozen chickens are cheaper than Mozambican chickens. Live Mozambican chickens weighing 1.1 kilos are being sold for between 140 and 150 meticals (5.2 to 5.6 US dollars). But an imported frozen chicken of the same size costs between 125 and 130 meticals. With the imported chickens seizing their market, many Mozambican poultry farmers, finding it difficult to pay their bank loans, have given up poultry altogether. It is reported that Mozambican chickens had been competitive in the first few months of 2011, but not anymore after about a 23 percent appreciation in the nominal metical exchange rate since January 2011. There is now an excess supply of imported chickens, and it has become difficult for Mozambican farmers to make a profit. The government in response to this problem has decided to remove the 17% VAT from companies producing chicken feed, as feed represents 60% of production costs. This story comes from the September 26, 2011 edition of the Maputo daily “Notícias”.

The analysis focuses on itineraries chosen to represent the varied tourism products, destinations, and market segments offered by the country's tourism experience.

The following itineraries were selected for the analysis:

- Lisbon - Maputo – Vilanculos/Bazaruto Archipelagos (Southern Leisure Tourism)
- London/Johannesburg - Maputo – Pemba/Quirimbas (Northern Leisure Tourism)
- Europe – Maputo (Business/Conference Tourism)
- Nelspruit - Maputo – Inhambane - Vilanculos – Bilene – Maputo (Southern Adventure Tourism)

The different value-chain cost structures in each of these itineraries result in differences in export trade shares, as large portions of the revenues from the trips are appropriated by foreign entities – e.g., foreign tour operators or foreign airlines. Table 4 shows the export trade shares for the four itineraries along with an estimate of imported input use in the production of domestic tourism services. It is clear that, although foreign entities appropriate a significant slice of value-added in some cases, effective export trade shares in tourism are large. In addition, imported inputs play a substantial role in producing value-added in the sector. Hotels and restaurants in particular import a large proportion of their food and beverages, so much so according to the IFC that these imports raise costs 5 percent above the average costs of competing export businesses in surrounding countries, such as Tanzania and Kenya (IFC 2006). In addition, Mozambique's tourism businesses use a lot of imported diesel fuel to run generators due to electricity problems, as well as imported building materials and foreign technical personnel. Thus, it is probably not an over statement to estimate that imported inputs represent roughly 35 to 40 percent of costs. Given the indicated high domestic value-added of tourism, real appreciation of the exchange rate would be expected to lower the terms of trade for tourism service exports and lower imported input costs for tourism facilities. The net effect would be to reduce relative tourism price incentives for investors, as terms-of-trade effects will dominate import-cost effects.

TABLE 4

Itineraries	Total Tourist Expenditure	Domestic Revenue (metical)	Export Trade Share (%)	Import Share of Cost
1.LMVB	2000	29040	44	>30
2.LJMQ	2846	75900	81	>30
3.Bus/Conf	2690	43230	49	>30
4.NMIVBM	1310	42405	98	>35

Source: IFC Tourism Study Mozambique 2006. Exchange rate in 2006 33 meticals = 1USD.

5. EXCHANGE RATE FLUCTUATIONS AND CHANGES IN VALUATIONS OF ASSETS AND LIABILITIES

5.1. ACCOUNTING FOR VALUATION EFFECTS

Exchange rate changes affect the prices of a country's assets and liabilities, thereby causing changes in portfolios and generating potentially large wealth effects that can influence the spending decisions of consumers and firms (Committeri 2000). Accounting for these changes in valuations of a country's assets and liabilities is summed up in balance sheet levels called the net international investment position (NIIP). NIIP shows the stocks of a country's international assets and foreign liabilities at a point in time. The NIIP consists of stock variables derived at the end of each year from changes in flow variables in the current and capital accounts of the balance of payments. For example, in terms of NIIP, a current account deficit corresponds to net financial transactions that increase (decrease) an external debtor (creditor) position.

A country is a net creditor (international assets > foreign liabilities) or a net debtor (international assets < foreign liabilities) depending on whether NIIP is in surplus or deficit. Put another way, we could say that, when NIIP is in surplus, the country's net external wealth position increased during the year, and, when it is in deficit, the country's wealth position decreased.

The impact of exchange rate changes on the wealth position of a country depends importantly on the currency denomination in which assets and liabilities are held. Exchange rate effects may be increased or decreased when the currency denomination of assets and liabilities vary. If assets and liabilities are denominated in the same currency and NIIP is in deficit, then exchange rate appreciation would reduce the NIIP deficit, and improve the country's wealth position, because the impact on the larger holdings of foreign liabilities would be more important than the impact on the smaller holdings of international assets. If, on the other hand, holdings of international assets are denominated in foreign currency while foreign liabilities are held in local currency, then this makes revaluation of external assets more responsive to exchange rate movements. An exchange rate appreciation, in this case, will increase the NIIP deficit, measured in domestic currency, and reduce the country's external wealth position²¹. If assets and liabilities were held in the same currency in a country with a NIIP of zero, then the net external wealth position would be unaltered by an exchange rate shock. As international assets and foreign liabilities are denominated in foreign currency in Mozambique, the issue of importance for exchange rate-induced valuation effects on the NIIP is the mix of foreign currencies in which these assets and liabilities are held and the differential rates of appreciation and depreciation of the metical against these currencies.

Table 5 shows Mozambique's NIIP from 2007 to 2010²². These data indicate that Mozambique is a debtor country with a net liability position of 91 percent of GDP in 2010. This reflected an accumulated increase in net liabilities over the period of almost 40 percentage points since 2007. What caused these changes in NIIP?

The international investment position is valued based on existing market prices of assets and exchange rates at the end of period each year. Therefore, changes in the international investment position are explained by three basic factors (a) revaluations owing to changes in asset prices and exchange rates (b) changes due to net financial transactions involved in movements in the current account and capital account in the balance of payments and (c) changes due to other adjustments. Since Mozambique runs a large balance of payments deficit (averaging about 11 percent of GDP after grants) requiring transactions to finance this shortfall, net financial transactions in the balance of payments had the largest impact on the NIIP over the period³.

Revaluations due to exchange rates and prices played a significant but smaller part. We do not have the information to make a precise calculation of NIIP revaluations due to exchange rate fluctuations. However, we do have data to examine price and exchange rate revaluations to Mozambique's external debt position, which represents a large portion of NIIP liabilities, in that total external debt (public and private) amounted to roughly 60 percent of GDP in each year during the 2007-10 period. As Table 5 indicates, revaluations to external debt due to prices and exchange rates were significant in every year. In 2007-08, when the real exchange rate appreciated, there were substantial downward revaluations to external debt, and in 2009-10, when the exchange rate depreciated, there were important upward revaluations. Over the whole period, revaluations due to prices and exchange rates netted out to be a downward revaluation of external debt of -3.3 percent of GDP or about -265mn dollars (see Table 5).

²¹ That is, the value of the country's international asset position in local currency is lowered by appreciation while its foreign liability position remains the same, exacerbating the NIIP deficit and reducing the country's external wealth position. This issue of assets and liabilities being denominated in a foreign and local currency, however, generally only arises in highly industrialized countries with internationally convertible currencies.

²² Data on Mozambique's NIIP are not available from the IMF's Balance of Payments Statistics before 2007.

This outcome is a bit different from what is found in more industrialized countries where there has been a growing importance of revaluation effects. The correlation coefficient between cumulative current account balances and NIIP changes in these countries declined from .6 in the 1980s to .3 in the 1990s due mostly to the effects of increased globalization on financial flows around the world (Lane and Milesi-Ferretti 2008).

²³ This outcome is a bit different from what is found in more industrialized countries where there has been a growing importance of revaluation effects. The correlation coefficient between cumulative current account balances and NIIP changes in these countries declined from .6 in the 1980s to .3 in the 1990s due mostly to the effects of increased globalization on financial flows around the world (Lane and Milesi-Ferretti 2008).

**TABLE 5: MOZAMBIQUE' NET INTERNATIONAL INVESTMENT POSITION
2007-2010 (\$MN)**

	2007	2008	2009	2010
Current Account Balance (after grants)	-785	-1179	-1171	-913
Current Account Balance/GDP	-9.7	-11.9	-11.9	-9.3
NIIP	- 6399	-7074	-8124	-8892
Total IIP Assets	3091	3320	4222	4422
Total IIP Liabilities	- 9490	-10394	-12346	13314
NIIP/GDP	79	72	80	91
Δ Real Effective Exchange Rate (+ = appreciation)	2.3	17.2	-21.7	-9.9
Effect of Revaluations on External Debt/GDP	-3	-8.7	3	5.5

Source: IMF balance of Payments Statistics; IMF Country Report (Sixth Review) 2010; Bank of Mozambique

5.2. CURRENCY AND ASSET SUBSTITUTION

As we noted above, the currency denomination of asset holdings in Mozambique influences the impact of exchange rate changes on the NIIP. Perhaps more importantly, it also influences the impact of exchange rate changes on ERPT and domestic price determination.

Mozambique is an economy significantly influenced by currency and asset substitution. Residents save and borrow in foreign currency and also use hard currencies for means of payment in business and consumption.

Dollarization, as it is often called, is part of the fabric of society. Three important questions for our discussion of exchange rate effects revolve around this issue of dollarization. First, just how dollarized (including other hard currencies like Euros and Rands) is the economy of Mozambique compared with other dollarized economies? Second, does the extent of dollarization affect the degree and speed of transmission of exchange rate shocks to domestic inflation? Third, if dollarization does affect ERPT, what are the implications for economic policy?

Asset substitution, or dollarization, can be measured in different ways, but the most often used gauge is foreign-currency denominated bank deposits as a share of total deposits. In terms of debt and ability to borrow in home currency, the best measure is foreign loans in the banking system as a share of total loans. Beginning with the ratio of foreign-currency bank deposits to total deposits, Mozambique has seen this ratio fluctuate around an average of about 40 percent since 2005 (Speed Policy Note 1/2011). Comparing this average deposit ratio with other dollarized countries in Asia and Latin America, using a ranking scheme devised by Reinhart, Rogoff and Savastano (2003), indicates that Mozambique is at the high end of a group of countries designated —moderately dollarized economies. Many of the high-end dollarized countries in Asia and Latin America had ratios of foreign-currency bank deposits in excess of 65 percent and some reached as high as 90 percent. The average ratio for moderately dollarized countries is in the neighborhood of 30 to 35 percent; so Mozambique is at the high end of this cohort. In terms of debt, the ratio of foreign loans in the banking system currently averages about 35 percent, where it stood at the beginning of the decade. This ratio, however, declined from a high of more than 60 percent in 2005 after the Bank of Mozambique instituted Aviso 5/2005, which regulated banks to book a 50 percent provision on loans in foreign currency to non-exporters.

Research shows that high dollarization influences the effect of exchange rate fluctuations on the economy. Reinhart et. al. (2003) found that highly dollarized countries have larger ERPT's and higher exchange rate volatility than countries with limited dollarization. In addition, Alvarez-Plata and Garcia-Herrero (2008) substantiate these results, showing that the magnitude of ERPT in highly dollarized countries is much higher, on average, than pass-through in moderately dollarized economies. So, the fact that Mozambique verges on high dollarization means pass-through will tend to be intensified.

A central reason why dollarization is so important for ERPT is that non-tradables are priced in foreign currency (e.g., rents and real estate sales) in dollarized countries; hence exchange rate changes in such a setting pass-through to a broader set of goods than in non-dollarized economies.

A high degree of dollarization and high ERPT to prices have important implications for economic policy. First, small open economies like Mozambique, with open current accounts, will have a difficult time conducting independent monetary policy because high dollarization and high ERPT limit the real effects of nominal devaluations. Monetary policy can have real effects by changing relative prices of tradables to non-tradables via the real exchange rate and by changing the interest rate on money in financial markets. In an economic setting with high dollarization and high ERPT, nominal devaluations will not have much of an impact on the real exchange rate, as the speed and magnitude of price level changes will undercut them. Thus, it is much more difficult for monetary policymakers to influence the real economy. Second, policymakers will have a heightened —fear of floating in dollarized economies with high ERPT. Rather than allowing the exchange rate to float freely, it tends to float, in the words of Calvo and Reinhart (2002), with —a lifejacket. Interventions in the foreign exchange market are more frequent and reserves are maintained at higher levels, all at substantial cost. Finally, under a monetary policy regime with an inflation targeting objective and a floating exchange rate, which appears to be the state of affairs in Mozambique, dollarized economies face numerous disadvantages in achieving their inflation goals because of (a) relatively higher ERPT on prices and (b) the vulnerability of the economy to balance sheet or asset valuation effects (i.e., owing to 35 percent of loans in foreign currency). These characteristics may make the exchange rate flexibility required by the inflation targeting regime disruptive and costly (Alevarez-Plata and Garcia-Herrero (2008).

6. EFFECT OF THE EXCHANGE RATE ON GROWTH

The impact of exchange rate movements on economic growth results from the cumulative influence of all the effects on prices, trade flows, firm earnings, and asset and liability valuations discussed in previous sections of this paper. Exchange rate-induced changes in incentives, generated by these price and valuation effects, lead to structural shifts in resource allocation, which, in turn, drive changes economic growth. The key element is the relative price of tradables to non-tradables (the real exchange rate) which shapes incentives in the growth process. Rodrik (2008) shows that countries achieve higher growth when they are able to increase incentives for investment in tradables by means of an undervaluation in the real exchange rate. Tradables are shown to be — special, in that production of tradables has positive spillover effects on the rest of the economy in the form of learning-by-doing and technology transfer. However, tradables suffer disproportionately from institutional weaknesses and market failures that often cause the size of the tradables sector to be too small in low-income, developing countries. Therefore, providing incentives (to partially alleviate distortions) to shift the share of tradables in the economy via real exchange rate depreciation could have positive growth-promoting implications.

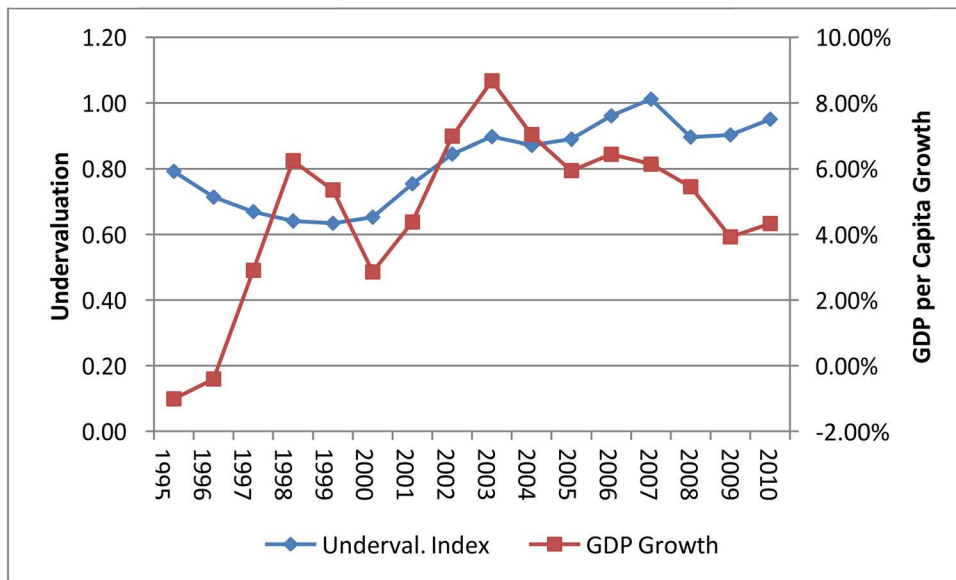
Indeed, it is difficult to think of many developing countries that have sustained growth accelerations in the presence of an overvalued exchange rate (Eichengreen 2008; Hausmann, Pritchett and Rodrik 2004).

We examine this proposition in the context of Mozambique’s economic development. Figure 11 shows a plot of the undervaluation index, computed as in section 1, together with changes in year-to-year GDP growth per capita for the period 1995 to 2010. As we noted in section 1, the real exchange rate has been overvalued for most of the period. However, overvaluation, as one can observe in Figure 10 (recall that below 1 = overvaluation, above 1 = undervaluation), has been steadily declining since about 1999 and by the end of the decade was close to PPP equilibrium. So the bias in incentives against tradable activities has been improving for more than a decade, but Mozambique had not yet reached a point where the relative price of tradables had begun to act as a second-best mechanism to alleviate distortions hindering tradables, which might help to foster desirable structural change. Over the same period trends in GDP growth per capita have oscillated up and down in multi-year swings — 2000-03 growth rose substantially, while in the years 2003-09 growth trended down.

Given these trends there does not appear to be much of an association between the undervaluation index and GDP growth per capita over this period. The correlation coefficient shows that the undervaluation index is positively correlated with growth per capita, but the coefficient is not significant²⁴. Following Rodrik (2008), we also analyzed the data using three and five-year averages to reduce some of the year-to-year noise and to allow time for adjustment to real exchange rate shocks, but there was no change in the results.

This finding is not surprising for several reasons. First, we are dealing with a relatively short time span in terms of observable changes in structural transformation large enough to spur growth. Second, as noted above, the real exchange rate by the end of the decade had just reached a point where it had removed much of the implied bias against tradable activities, however extreme volatility remains. Third, statistical evidence in studies of the impact of the real exchange on growth has not always been conclusive and for good reason. The real exchange rate should be thought of as a facilitating condition (Eichengreen 2008). Avoiding excessive overvaluation and excessive volatility enable a country to exploit its capacity for growth and development — to take advantage of good infrastructure, an experienced, well-trained labor force, a high savings rate, and a good business environment for foreign investment. As we will discuss in more detail in the final section of this study, an appropriately aligned real exchange rate will not have much impact on growth absent these other growth-promoting factors. Finally, we might uncover a deeper association between the undervaluation index and growth by conducting a more elaborate time-series analysis of this relationship, however this is difficult because one only has 15 years of observations and it is difficult to carry out a proper time-series analysis including all the appropriate control variables. Quarterly data for all the variables was also not available, which could facilitate such an exercise.

FIGURE 11: UNDERVALUATION AND ECONOMIC GROWTH



Source: Penn World Tables

²⁴ Pearson Correlation Coefficients, N = 18 Prob > |r| under H0: Rho=0

	underval	growth
underval	1.00000	0.34449 std. error 0.1615
growth	0.34449	1.00000

7. CONCLUSIONS AND POLICY IMPLICATIONS

Mozambique's real exchange rate has been overvalued for most of two decades, creating disincentives for investment in tradable goods and services. However, overvaluation throughout this period has been declining steadily, from a peak of 36 percent in the 1995-2000 period to close to PPP equilibrium by 2010.

In 2011, the metical has appreciated substantially, particularly against the US dollar, and has again become misaligned. Using the average Dollar/metical rate for the first eight months of 2011 to estimate the extent of real exchange rate overvaluation, we find that the real metical is today about 11 percent overvalued. Using the dollar/metical rate reached in August of this year, the real metical exchange rate is estimated to be more than 30 percent overvalued.

Mozambique's real exchange rate volatility is high, which could be having negative effects on trade and investment. Using the standard deviation of the first difference of logarithms of the exchange rate to estimate the degree of volatility, we find that Mozambique's volatility over the 1995-2011 period has averaged 3.9. When benchmarked against the level of exchange rate volatility in other developing countries, however, Mozambique's high average volatility is not abnormal for a developing country that is a primary commodity exporter. This cohort of developing countries exhibits the highest exchange rate volatility in the world, largely owing to time-honored shocks in global commodity markets.

Five transmission channels are highlighted in the study through which exchange rates influence economic events. We examine each of these mechanisms to see how recent levels and volatility of the metical are affecting Mozambique's economy. The first transmission mechanism is via prices.

Exchange rate fluctuations influence both import and export prices. On the import side, exchange rate changes first pass-through (ERPT) to import prices. Next, it reverberates down the pricing chain to consumer and producer costs. The ERPT to export prices leads to changes in exporter profit margins and trade volumes.

We show that the ERPT to import prices, and on down the pricing chain to consumer prices, is very high – estimated to be upwards of 75 percent. In other words, here is almost complete pass-through. This has significant policy implications, which we will discuss in more detail below. As for the ERPT to export prices, we find it to be low – somewhere around 30 percent. The reasons for this revolve around the particulars of the composition of the export basket, competitive pressures in foreign markets, and exporter pricing-to-market behavior. As we noted in section 2, mega-project exports are relatively insensitive to metical exchange rate shocks, and small, non-mega exporters are often compelled to engage in pricing-to-market behavior to protect their foothold in highly competitive markets.

The second transmission channel we examined is the link between exchange rate changes and trade flows. A crucial element in this association is the ERPT. The overall effect of an exchange rate change on trade flows is dependent on the magnitude of the ERPT to import and export prices. Given that the ERPT to export prices in Mozambique is only about 30 percent and significant constraints exist in Mozambique's business environment, one might expect that the trade response to exchange rate changes is somewhat restrained. However, we find that there is a significant correlation between aggregate trade flows and exchange rate shocks. The elasticity of export supply (export volumes) to real exchange rate changes is -0.83 . When one looks at individual exports one also finds a significant association between exchange rates and trade volumes. In the case of cotton exports, for example, a 10 percent depreciation (appreciation) of the real effective exchange rate is estimated to increase (decrease) export volumes by 13 percent.

Third, we look at the microeconomic impact of exchange rate fluctuations on firm earnings. The effect of exchange rates on enterprise profits depends on the extent to which a firm is involved in trade, in terms of either exports or imports, the competitive environment within which a firm operates, and the extent of foreign exchange exposure of a firm's balance sheet. In the end, the link between firm profits and exchange rate changes is largely an empirical issue, as it is difficult to say in advance what the final outcome will be in all cases, as it depends on the characteristics of the firm and its products, as well as the nature of competition. The study focuses on firms in agriculture and tourism.

Turning first to agriculture, an important issue for entrepreneurs and firms making investment decisions in agriculture is how exchange rate shocks affect relative producer price incentives between sectors, such as agriculture and industry. Trade and macroeconomic policies in developing countries have often been distorted, producing negative effects for relative producer price incentives in agriculture. The policy prescription for this problem is to get prices right by reducing these distortions to improve agricultural price incentives for investors. A key element in this treatment has been to remove any overvaluation in exchange rates, as appreciation is generally seen as an important negative for tradable agricultural goods. However, exchange rates have differing impacts on relative agriculture price incentives depending on specific country characteristics.

Differences in impact depend crucially on a country's relative trade shares between agriculture and industry and on the relative elasticity of import demand and export supply.

Trade shares of primary agriculture in Mozambique are quite low and there is a bias toward imports. Agriculture's use of imported inputs is also relatively low. Industry's trade shares, by contrast, are high, especially when mega projects are included, and industry's use of imported inputs is high.

Accordingly, real appreciation of the metical would be expected to improve (or have very little impact on) relative price incentives in agriculture and real depreciation to worsen them. Real appreciation generally works to lower the terms of trade for exports and lower input costs for sectors using imported inputs. Thus, in Mozambique, because of the low aggregate trade shares of primary agriculture, imported-input cost effects of appreciation dominate terms of trade effects, leading to improved relative agricultural price incentives.

But this aggregate impact of exchange rates on relative agricultural price incentives conceals differences in outcome across specific products. Individual agricultural commodities differ significantly in their trade shares and use of imported inputs. As a consequence, exchange rate impacts on producer price incentives within agriculture differ product by product. Primary food crops, which dominate value-added in the sector, have low trade shares and imported input use is generally low. Export crops, on the other hand, such as cotton, tobacco, and cashew, have much larger trade shares than staples. Accordingly, real exchange rate shocks have a more substantial impact on the export terms of trade for these commodities. Real appreciation, in the case of these tradables, worsens relative producer price incentives and real depreciation improves them, as negative export terms-of-trade effects will dominate positive imported-input effects. We found support for this outcome with regards to cotton, as noted above. Since it is these tradable agricultural products that provide the majority of cash income for rural smallholders, any extended episode of real exchange rate appreciation can have adverse consequences for the livelihoods of a large segment of society, including the poorest segments of the populace who are part of this smallholder cohort.

For domestic import-substitution investments in staple foods, particularly in crops such as rice and wheat with large import shares in consumption, appreciation will tend to reduce producer price incentives, as competitive effects from falling import prices of these staples out-weight any positive effects from lower costs of imported inputs. The impact of exchange rate swings on the competitiveness of these investments is important because it influences Mozambique's ability to deal with rising world food prices, which is becoming an ever more pressing problem, considering the country's large requirements for imported staples to feed a low-income, growing population.

Focusing on domestic rice production, this study shows that competitive margins in import-substitution investments are thin; hence, exchange rate appreciation can have serious consequences for investor returns, reducing domestic production capacity and food security.

The fourth transmission channel through which exchange rates affect the economy is via valuation effects. Exchange rate fluctuations affect the prices of Mozambique's assets and liabilities, thereby causing changes in portfolios and generating potentially large wealth effects that can influence the spending decisions of consumers and firms. Accounting for these changes in valuations of Mozambique's assets and liabilities is summed up in balance sheet levels called the net

international investment position (NIIP). NIIP shows the stocks of a country's international assets and foreign liabilities at a point in time. We examine Mozambique's NIIP for the years 2007-10 to see the impact of exchange rate changes on the country's net asset position.

Mozambique is shown to be a debtor country with a net liability position of 91 percent of GDP in 2010. This reflected an accumulated increase in net liabilities over the period of almost 40 percentage points since 2007. Changes in this international investment position are explained by three basic factors: revaluations owing to changes in asset prices and exchange rates; changes due to net financial transactions involved in movements in the current account and capital account in the balance of payments; and changes due to other adjustments.

Given that Mozambique runs a large balance of payments deficit (averaging about 11 percent of GDP after grants), which requires transactions to finance this shortfall, net financial transactions in the balance of payments had the largest impact on the NIIP over the period. Revaluations due to exchange rates and prices played a significant but smaller part. Price and exchange rate revaluations to Mozambique's external debt position, which represents a large portion of NIIP liabilities (roughly 60 percent of GDP in each year during the 2007-10 period), were significant in every year. In 2007-08, when the real exchange rate appreciated, there were substantial downward revaluations to external debt of -3 percent and -8.7 percent of GDP. In 2009-10, when the exchange rate depreciated, there were important upward revaluations of +3 and +5.5 percent of GDP. Over the whole period, revaluations due to prices and exchange rates netted out to be a downward revaluation of external debt of -3.3 percent of GDP or about - 265mn dollars.

The fifth effect of exchange rate movements on the economy is through their impact on economic growth. The effect on economic growth results from the cumulative effects of exchange rates on prices, trade flows, firm earnings, and asset and liability valuations discussed above. Exchange rate- induced changes in prices and valuations influence incentives, which, in turn, lead to the structural shifts in resource allocation that drive changes economic growth. The key element in this chain of events is the relative price of tradables to non-tradables (the real exchange rate) which shapes incentives in the growth process. Countries have been shown to achieve higher growth when they are able to increase incentives for investment in tradables by means of an appropriately valued real exchange rate. We examined the growth-exchange rate link in Mozambique, but we were unable to find an association between our computed index of exchange rate undervaluation and growth over the 1995-2011 period.

The correlation coefficient shows that the undervaluation index is positively correlated with growth per capita, but it is not significant. As other researchers have noted, statistical evidence in studies of the growth-exchange rate link has not always been conclusive because the real exchange rate is a facilitating condition not a direct growth driver. Avoiding excessive overvaluation and excessive volatility enable a country to exploit its capacity for growth and development.

Without a well-functioning infrastructure, a disciplined labor force, a high savings rate, and a good investment climate, an appropriately aligned real exchange rate will have little impact on growth.

7.1. POLICY IMPLICATIONS

The implications of these findings for policy can be stated as follows. Policymakers have done a relatively good job in Mozambique over the last decade managing macroeconomic variables to bring the real effective exchange rate back into rough PPP equilibrium. This has substantially improved incentives for investment in tradable activities over the 1995-2010 period. So far, in 2011, however, the real exchange rate has become misaligned again to the point where tradable investments are now being disadvantaged and exporters of primary agricultural products and import substitution activities are feeling the pinch.

As a policy matter, the real exchange rate is best thought of as a facilitating condition: maintaining it at competitive levels and avoiding excessive volatility facilitate efforts to capitalize on opportunities for growth. In particular, the real exchange rate can be critical for jump-starting growth, as it shapes incentives that encourage the redeployment of resources into tradables, which can produce immediate productivity gains. However, policymakers should be mindful that exchange rate policy cannot substitute for the absence of other fundamental growth drivers – good infrastructure, well-trained labor force, supportive business environment and so on. In addition, the real exchange rate is a relative price and therefore is not under direct control of the authorities. It can, however, be influenced by policy. Hassan and Simione (2010), for example, find in their study of exchange rate determination in Mozambique that nominal exchange rates are driven by macroeconomic fundamentals (such as money supply), which are clearly under the influence of policymakers.

Mozambique's relatively high dollarization and high exchange rate pass-through to prices have implications for monetary policy. First, the real effects of nominal devaluations via changes in the real exchange rate are limited when pass-through is high. Second, there tends to be a —fear of floating, which increases costly interventions in the foreign exchange market and increases costly holdings of foreign exchange reserves. Third, inflation-targeting monetary regimes with floating exchange rates, which, according to the IMF, Mozambique is currently working towards, face disadvantages that impede the ability to achieve inflation objectives. High ERPT and balance sheet effects often make the exchange rate flexibility required by inflation-targeting disruptive and costly.²⁵

Exchange rate volatility is high in Mozambique, but it is not abnormal for a low-income, developing country that exports primary products. The implications of high exchange rate volatility for financial stability and growth depends on the presence or absence of relevant hedging markets—and on the depth and general level of development of the financial sector. Mozambique has been improving in this area, but there is good reason to believe from research in other countries that, where financial markets are underdeveloped, a more variable exchange rate is negatively associated with growth, particularly productivity growth. The central reason is that firms and households lack the instruments needed to manage volatility. Thus, there is a need for the authorities to avoid excessive volatility (realizing that Mozambique's volatility will normally be higher than in other countries) by prioritizing stable monetary and fiscal policies, intervening in the foreign exchange market as needed to prevent spikes (excessive volatility) in the nominal and hence the real exchange rate, and improving structural factors in financial and foreign exchange markets.

It is clear from the study that the exchange rate has an important impact on Mozambique's economy, in terms of domestic price determination, competitiveness of export and import substitution investments, and asset valuations. These outcomes highlight some difficulties for policymakers. On the one hand, to keep down domestic inflation and to keep urban consumers of staple foods happy, exchange rate appreciation has some desirable short-run benefits.

Primary among them is that high pass-through to prices means that imports of consumer goods and staple foods will be cheaper, which is especially important for urban household budgets. On the other hand, overvaluation of the real exchange rate can hurt long-run growth prospects by reducing incentives for investment in tradable activities, including important import substitution investments for food security. This tension between short-run political necessity and long-run growth prospects may become more evident in the future as mega-investment trade flows put upward pressure on the exchange rate. Authorities will have to pay closer attention to this policy trade-off as export revenues ratchet up, and should keep in mind that development experience – highlighted by the high- growth economies of Asia, but also development experience more generally, tells us that keeping the real exchange rate at competitive levels can be critical for growth prospects, particularly in low-income countries.

²⁵ The IMF notes that the Mozambican authorities are still benefitting from the IMF's technical assistance on monetary policy formulation and operations and are working towards an inflation-targeting monetary regime over the medium term.

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APPENDIX I REGRESSION RESULTS: TRADE ELASTICITIES

Dependent Variable: Export Volumes	DF	Parameter	Standard	t Value	Pr > t
		Estimate	Error		
Intercept	1	-242.48994	14.0627	-17.24	<.0001
lwtgdp	1	8.61677	0.45703	18.85	<.0001
lreer	1	-0.83373	0.36125	-2.31	0.0338

Dependent Variable: Export Value Index/Export Price Index	DF	Parameter	Standard	t Value	Pr > t
		Estimate	Error		
Intercept	1	-194.42856	10.0957	-19.26	<.0001
lwtgdp	1	7.43934	0.32811	22.67	<.0001
lreer	1	-0.37645	0.25934	-1.45	0.1648

Dependent Variable: Mega Export Values/CPI	DF	Parameter	Standard	t Value	Pr > t
		Estimate	Error		
Intercept	1	-252.67634	18.15729	-13.92	<.0001
lwtgdp	1	8.83483	0.5901	14.97	<.0001
lreer	1	0.07341	0.46643	0.16	0.8768

Dependent Variable: Non-Mega Export Values/CPI	DF	Parameter	Standard	t Value	Pr > t
		Estimate	Error		
Intercept	1	-245.22867	13.87507	-17.67	<.0001
lwtgdp	1	8.52095	0.45093	18.9	<.0001
lreer	1	0.30366	0.35643	0.85	0.4061

Dependent Variable: Cotton Export Volumes	DF	Parameter	Standard	t Value	Pr > t
		Estimate	Error		
Intercept	1	-49.92496	15.84774	-3.15	0.0062
lwtgdp	1	2.24763	0.51365	4.38	0.0005
lreer	1	-1.2965	0.39313	-3.3	0.0045

Dependent Variable: Cotton Export Values/CPI	DF	Parameter	Standard	t Value	Pr > t
		Estimate	Error		
Intercept	1	-60.09264	21.62098	-2.78	0.0134
lwtgdp	1	2.51217	0.70076	3.58	0.0025
lreer	1	-0.73404	0.53635	-1.37	0.19

Dependent Variable: Import Values/Import Price Index	DF	Parameter	Standard	t Value	Pr > t
		Estimate	Error		
Intercept	1	-0.60767	1.63715	-0.37	0.7151
lgdp	1	0.92479	0.05533	16.71	<.0001
lreer	1	0.08042	0.14706	0.55	0.5916

CHAPTER 1.4
CONCEPT NOTE:
EXTRACTIVE INDUSTRIES IN
MOZAMBIQUE - WHAT ARE THE MAIN
CHALLENGES AHEAD AND HOW CAN
THEY BE ADDRESSED?

1. BACKGROUND

Mozambique has the potential to become a world class exporter of gas and mineral resources. Recent projections indicate that GDP (Gross Domestic Product) could triple in real terms in the next 15 years with mineral resources representing about 40 to 50 percent of GDP by then. Not only will total income increase, but its structure will rapidly shift towards the extractive sectors. The question is whether redistribution of income will favor Mozambican citizens and in particular the most needy.

Global experience shows that few countries have managed to transform rapid influxes of finite wealth into growth and development. Good economic and social performance is generally related to a country's institutional capacities. The stronger the institutional capacity, the higher the likelihood that captured revenue is transformed into investment, job creation and economic diversification and, consequently, limits the negative impact of the revenue influx from resources (the resource curse). Conversely, countries with weak institutional capacity often register poor performance. Weak institutional capacity and rapidly amassed finite revenues are strongly associated with poor economic growth, poverty persistency, loss of competitiveness in particular in the non-extractive tradable sectors (which shrink as a result of the fast real exchange rate appreciation), accelerated inflation, and increased corruption. In other words, Dutch Disease and the resource curse prevail and countries end up with stagnant individual incomes, dubious economic and social prospects, and often political instability.

Mozambique's future should be bright but challenges lie ahead. The first challenge is the appreciating real exchange rate and its impact on competitiveness. The second is the country's limited institutional absorption capacity. The third is the potential for increasing corruption. The fourth challenge is the urgent need for more transparency in governance to improve citizens' knowledge about resource mobilization and use, limit corruption and contribute to improved budget prioritization and efficiency.

2. OBJECTIVE

The objective of this Note is to discuss these challenges and propose areas where USAID/SPEED (United States Agency for International Development / Support Program for Economic and Enterprise Development) could assist through research and policy recommendations. The aim of the Note is not to include policy recommendations but rather to set the groundwork for initiatives to be developed and drive a discussion on USAID/SPEED's support to the reform process in Mozambique. This discussion takes into account the current work by the Extractives Industry taskforce and others, aiming to complement and leverage their work rather than duplicate it.

3. THE CHALLENGES AHEAD

Mozambique's future should be bright and prosperous. Achieving this will require hard work and the right policies. The gas and mineral resource sectors will have significant impacts on the Mozambican economy and society. The exchange rate will rapidly appreciate in real terms and the economy will lose competitiveness – tradables from the non-mineral resource sectors could gradually disappear, with agriculture, manufacturing, and tourism suffering the most. These are the sectors that have the highest potential for creating jobs¹ and transforming the economy – they compete with the rest of the world, face the law of one-price, affect job creation and, therefore, determine the success of the economy.

¹ The Mozambican economy is projected to have more 1.5 million youth (above 19 years of age) between 2011 and 2015 joining the labor market, an annual average of more than 370,000.

3.1. EXCHANGE RATE MANAGEMENT AND COMPETITIVENESS

Mozambique must actively manage its real exchange rate appreciation. Fast appreciation implies a proportionally fast loss in competitiveness of tradable goods² (from the non-mineral sectors). This can only be overcome by even faster gains in domestic productivity, which are difficult to achieve in the short-term. Increases in productivity require spending on human capital, technology, basic infrastructure and utilities, an enhanced business environment, and a strengthened rule of law.

EXCHANGE RATE

The policy option cannot be to do nothing. Decelerating the real appreciation of the exchange rate has to be at the core of the Government of Mozambique's (GOM) policy to gain time to transform and adjust the economy. Letting currency markets operate freely in an environment of an appreciating exchange rate will condemn tradable sectors to disappear. In particular, it will imply that: (i) smallholders cannot sell their surpluses as imports are cheaper, and these farmers are trapped in poverty; (ii) industrialization of Mozambique can only happen through capital-intensive investments; and (iii) job creation opportunities may shrink despite the needs of a growing young population.

Experience shows that the best policy option is to set up a sovereign wealth fund. This fund has to be kept abroad to significantly reduce the supply of foreign exchange in the economy, thus decelerating the appreciation of the currency. This is not conceptually different from international reserves that central banks normally keep and manage. The most important difference is that international reserves accrue costs – foreign exchange is normally bought at domestic interest rates (in Mozambique these are at about 14-16 % per year) through sterilization and these assets are typically invested in sovereign debt from economically strong and stable countries (US, EC, Germany, UK) with returns of 1-2 % per annum. In contrast, sovereign wealth funds mobilize revenues abroad directly from the mineral resource sector companies (from royalties, licenses, income tax and others) and invest the funds abroad in government debt as international reserves. The revenues do not flow into the country and do not accrue the cost of buying the foreign exchange. Budget appropriations from the fund are established by law and usually finance a budget deficit approved by parliament according to established rules.

COMPETITIVENESS

Competitiveness does not only encompass the exchange rate. The business environment in Mozambique is cumbersome and presents an obstacle for private sector development and sustainability³. Low productivity in agriculture is a significant component of competitiveness and needs to be addressed. Access to markets and utilities is difficult and industrialization is almost non-existent. Tourism also has a tremendous potential as do the energy, transport and telecom sectors. Linkages to the more dynamic extractive sectors offer a significant opportunity as well.

BUSINESS ENVIRONMENT

The business environment in Mozambique is weak. Mozambique was ranked 139 out of 183 countries surveyed (bottom 25 percent) in the Doing Business 2012 report⁴. Doing Business 2013 will most certainly show Mozambique falling again in the ranking because no significant initiative was taken in the 12 months up to May 2012; most countries continued implementing reforms causing non-reformers to fall further behind. The poor business environment affects mostly small and medium enterprises doing business in Mozambique.

² Goods produced domestically and competing with imports and/or are exported.

³ SPEED has produced a few reports assessing the business environment in Mozambique. These reports include a large set of reforms to improve the business environment. These reports can be obtained from SPEED's web page: www.speed-program.com

⁴ This report can be downloaded via <http://www.doingbusiness.org/reports/global-reports/doing-business-2012>

Some improvements have been achieved, for instance in registering a company. The number of days and costs to register a company have been dramatically reduced. SPEED assistance to the Maputo City Council will significantly shorten the number of days and costs to obtain a construction license. These are important steps, but are small when compared to the overall business environment reforms required to make local business competitive.

Success in job creation depends on sustained development of the private sector. Currently, the private sector is only creating some 15-18,000 new jobs per year, while an estimated 370,000 young people join the labor market every year. Due to a lack of coordination among government departments and weak institutional capacities, the GOM should prioritize a few policies to begin with and address only 4-5 policy/issues at a time.

When surveyed, private sector companies identified the following 3 most important obstacles for their development⁵: (i) criminality, (ii) high tax rates and bureaucratic processes to pay taxes and long time lags to receive VAT refunds, and (iii) corruption. Access to credit and heavily bureaucratic processes across the board are the next 2 impediments. The real appreciation of the exchange rate as discussed above is also identified as a major obstacle for business success.

Crime is growing fast in urban areas. The urban population is growing faster than the country's population implying that rural-urban migration is a fact. This migration puts pressure on job and income opportunities in the urban and peri-urban areas. The fact that migrating families often still get some access to land for agricultural production gives them an income/cushion opportunity and reduces criminality.

The informal sector in the urban and peri-urban areas is also growing rapidly. The positive side is that it is creating income opportunities for those without access to a formal sector job. However the informal sector may compete unfairly with the formal sector.

The country has to be more effective transforming its business environment. This has to include radically modernization and simplification of bureaucratic processes, possibly reducing tax rates, simplifying the tax regime and broadening of the tax-base, addressing the issue of corruption in general but in particular connected with private sector development, and enhancing crime control and public safety.

AGRICULTURE

Agriculture has great potential for growth. Three-quarters of the population generates income in this sector. Productivity is low. Addressing productivity in agriculture is essential if poverty reduction is to be achieved. Productivity gains entail expanding commercial agriculture across the country, which requires technology, and access to markets and information.

Smart engineering needs to be in place encompassing the role of the state and the private sector to develop agriculture. A clear-cut strategy with specific objectives, policies, action and results should exist – significant analytical work with recommendations has already been produced but priorities and results need to be determined in such strategy and plan has to have success – and be implemented, monitored and evaluated, and corrective measures taken when needed. Major obstacles include the lack of skills, a cumbersome business environment, and an appreciating exchange rate.



⁵ The Two studies were prepared based on surveys made with the private sector: The World Bank through the report "Mozambique Investment Climate Assessment 2009" identified the top 5 obstacles to private sector development as: informal sector competition, access to finance, crime, high tax rates, and corruption. This document can be obtained through the link: <http://siteresources.worldbank.org/INTMOZAMBIQUE/Resources/ICAMoz.pdf> ; and KPMG through its publication "Business Climate Index 2010" identified as top 5 obstacles for private sector development: illegal imports, HIV/AIDS, malaria and other diseases, corruption, and organized crime and criminality. This report can be obtained through the link: <http://www.kpmg.co.mz/corporate/Midia/Files/Indice-do-Ambiente-de-Negocios-2010>

TOURISM

Tourism also has great potential to generate direct and indirect jobs. The direct jobs occur during construction of facilities and operation of those same facilities. The indirect jobs will be created by the suppliers of goods and services that the tourism industry requires – from food, to entertainment, transport and others. This industry needs access to land and less costly transport services – air ticket prices currently charged in Mozambique are expensive and do not help to stimulate tourism. Mozambique will have distinct tourism customer segments, and opportunities will often be located in different places and will also have different demands and requirements.

Action in the tourism sector has to include improving land concessioning and the business environment, access to infrastructure and utilities, enhanced links with suppliers to expand Mozambique's participation and job creation, and dramatically lower cost transportation in the country via air transportation liberalization.

SUPPLY LINKAGES TO EXTRACTIVE SECTORS

The extractive sectors will be the most dynamic sector in Mozambique in the next few years mostly due to the volumes of investment that will take place. Investors in extractives will require a long list of goods and services for their operation and expansion activities. Mozambican companies can and should be the generators of these goods and services to not only adding more value to the country's resources but also expanding job creation activities. The success of these linkages will depend on the business environment, and access to skills and expertise.

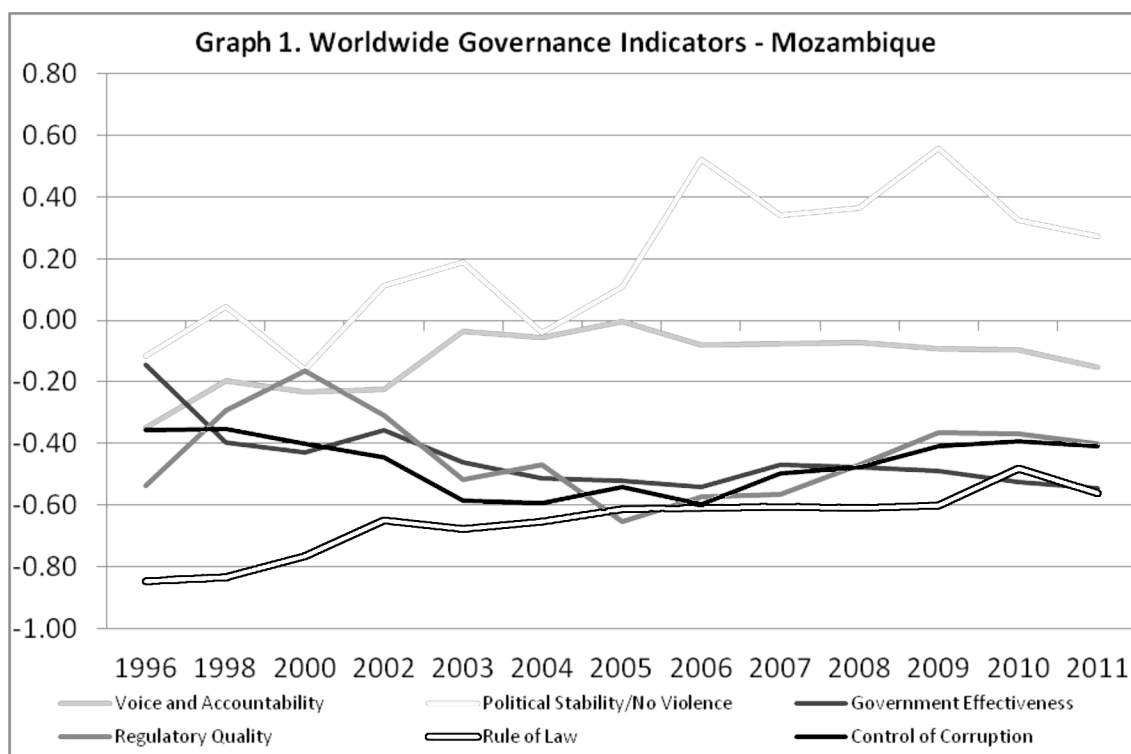
3.2. INSTITUTIONAL CAPACITY AND ABSORPTION

Institutional capacity is paramount for a country to transform its revenues into a blessing. Strong, accountable and efficient institutions have the capacity not only to define objectives, priorities and results, but also to implement policies, investment and recurrent expenditure that will efficiently impact growth and development. Stronger institutions also help set a policy framework and environment conducive to stimulating economic growth through private and public sector growth, increasing the efficacy and transparency of revenue mobilization and expenditures, and enhancing the rule of law and public safety.

Strong, efficient and effective institutions entail four major factors. The first is related to human capital development and quality. Quality education and health services are the vehicle to gradually build human capital, respond to demands from the economy, and affect economic and social change. The second factor is the simplification, modernization and reduction of bureaucratic processes which will generate more and better services, allowing for civil servants to concentrate on setting a policy environment for growth and development – this is often also related to improved pay in the civil service to ensure that some of the best experts can be hired. The third factor is transparency and accountability of the civil service which are intimately related to government performance (see below). Political will is the fourth and last factor, but is as important as the others. Without political will, Mozambique's challenges will not be overcome and the country will end up as just another "resource curse" case.

Institutional capacity is a significant marker for success in countries blessed with mineral resources. Often, resource-rich countries are initially very poor, with enormous unsatisfied demands and a sense of urgency to rapidly deliver. Telling these countries not to spend is a difficult policy option. The tendency is for countries to try to spend as fast as revenues are accrued in response to pressing demands. As a result of weak institutional capacity, spending efficiency reduces quickly, prioritization becomes lax to allow for more expenditure to be realized, and corruption grows.

The Worldwide Governance Indicators⁶, a World Bank publication, gives an informative picture of governance – see Graph 1 below with Mozambique’s indicators. The publication measures the following 5 indicators: voice and accountability; political stability/no violence; government effectiveness; regulatory quality; rule of law; and control of corruption. The indicators are measured between -2.5 (weak) and +2.5 (strong). The indicator related to institutional capacity and effectiveness is “government effectiveness”. The government effectiveness captures the quality of government service delivery, institutional capacity, and absorption. This indicator for Mozambique evolves from -0.14 in 1996 to -0.55 in 2011, a deterioration of some 40 percent. This indicator shows that increased budget expenditure caused absorption capacity in fact to decrease, making the government less effective. Therefore the issue in Mozambique is not expanding budget expenditure. Any attempt to increase absorption capacity and government effectiveness has to include building institutional capacity together with modernization and simplification of systems and only then, more expenditure.



Then the preferred policy option should involve capacity building and increasing expenditure under containment to avoid the resource curse through further negatively impacting absorption capacity. This mixed approach should have 4 major components. The first component sets a framework to allow the civil service to contract some of the best experts to deal with reform, modernization and policy recommendations, and ensure proper implementation, monitoring and evaluation, and accountability of decisions. The second component is public sector reform aimed at modernizing, simplifying systems, improving efficiency and efficacy of deliverables and defining a set of priorities. The third component includes significant investments in education and health to deliver more and better services, together with intensive and rapid delivery of vocational training that responds to the economy’s demands for skills. The last component entails designing an expat recruitment strategy to bring to Mozambique some of the best skills to assist the civil service to better respond to these challenges.

⁶ This a World Bank publication and can be downloaded through the link: <http://info.worldbank.org/governance/wgi/index.asp>

In parallel and because building institutions and system takes time, it is important to explore instruments that address the basic needs of some of the poorest. Some of the captured revenues should be transferred in cash to defined groups of citizens in deplorable situations such as the elderly, the handicapped and their families, malnourished pregnant women and children below 5 years of age. Cash transfers can be sophisticated vehicles targeting specific groups of people.

Experience also shows that conditional or non-conditional transfer programs are feasible to establish.

3.3. TRANSPARENCY AND CORRUPTION

Transparency is pivotal for success. It improves efficiency of the decision process and policy implementation. Transparency contributes to enhanced participation, efficiency, and effectiveness of results. Transparency improves implementation of policy decisions because the decision-making process involves stakeholders' demands and concerns. Higher degrees of transparency impose pressure on institutions to deliver well. Transparency increases accountability and responsibility of agents (economic, social, private, government). Transparency facilitates transformation and increases responsiveness and ultimately makes the economy and the business environment more conducive to private sector development.

A lack of transparency can generate waste, low levels of efficiency and corruption. Combined with a lack of political will, weak institutions and systems, a lack of transparency generates possibilities for corruption.

Graph 1 above shows indicators related to transparency and corruption. The transparency indicators are “voice and accountability” and “regulatory quality”, while the indicator for corruption is “control of corruption”. The “voice and accountability” indicator has improved somewhat from -0.35 in 1996 to -0.15 in 2011, after reaching zero in 2005; in real terms since 2005 this indicator has been deteriorating. The “regulatory quality” improved slightly from -0.54 to -0.40, between 1996 and 2011, with some better performing years in between. These two indicators reflect the limited transparency and lack of consultation with stakeholders, in particular, the private sector and civil society.

The “control of corruption” indicator in Mozambique decreased from -0.36 in 1996 to -0.41 in 2011. Consequently, corruption is rooting deeper and growing in the economy. Through their annual “Corruption Perception Index-CPI”⁷, Transparency International ranks Mozambique with high levels of corruption; in 2011 Mozambique was ranked at 120th among 182 countries surveyed with a score of only 2 when compared to the best performer New Zealand with 9.5.

Increased resource mobilization in this type of environment can result in increased corruption. In a downward spiral, corruption further destroys institutions, accountability, and transparency and further erodes the growth and development.

The best option is to enhance transparency and combat corruption. Doing nothing will undermine trust in the economy and governance, concentrate income distribution in the few elite who have access to power while resulting in the majority falling deeper into poverty, and curtailing private sector expansion and job creation at least in the formal sector of the economy.



⁷ The Transparency International CPI can be obtained through the link: <http://www.transparency.org/research/cpi/>

CHAPTER 2.1
SECTORAL COMPETITIVENESS
COMPETITIVENESS IN LIGHT OF
MOZAMBIQUE'S RESOURCE BOOM

Martin Webber
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1. PROSPECTS FOR COMPETITIVENESS IN THE CONTEXT OF MOZAMBIQUE'S RESOURCES BOOM

Two visits to Mozambique by Tyler Biggs, were organized by CTA (Mozambique Confederation of Economic Associations) and SPEED (Support Program for Economic and Enterprise Development) in 2011 and 2012. During these visits, Dr. Biggs highlighted the economic risks facing Mozambique from “Dutch Disease” and the “Resource Curse”. These two linked and widely studied phenomena result from structural changes and management of revenues arising from a boom led by extractive resources exports (or, for that matter, from any large and extended influx of revenues, such as from international aid). Dr. Biggs suggested that certain tradables sectors in Mozambique were at risk of facing negative pressures as a result of a resource boom, that would impact their sustainability and competitiveness.

These patterns are determined by factors such as an appreciating exchange rate, increases in wages especially for skilled labor, and scarcity of skills. They are symptomatic of local prices being “bid up”, and a movement of resources towards the economic sectors – the non-tradables – whose prices are determined within local, rather than competitive global, markets.

Consequent expectations or concerns therefore include:

- Extractive resources will provide substantial revenue (that can be invested, saved or spent), consumption from investment or higher incomes will increase prices.
- Labor costs will increase, especially in respect of persons with skills or in locations that are proximate to megaprojects and other centers of investment and economic activity.
- The Metical will suffer pressures to appreciate against other currencies because of increases in prices of non-tradables versus tradables (spending and resource movement effects).
- There will be tendency for labor to migrate to cities (and corridors) if rural areas do not provide jobs and wealth, and if work opportunities are seen as better or only potentially available in the cities.
- There will be a tendency for labor to migrate to non-tradable sectors, meaning that tradable sectors, if these do not see improved productivity, will face serious sustainability issues.
- Imports will become relatively inexpensive.

These outcomes are not inevitable. The government can take actions to mitigate these outcomes. On the other hand, there is reason to expect that these outcomes will occur. They have occurred in many other countries.

Debate around this issue needs to be properly informed, and discussed in a transparent manner. While it would be misleading to suggest that these issues have not yet been considered in Mozambique, the consultants had the impression that the resource curse and Dutch Disease impacts were not being widely and openly discussed, that potential impacts on competitiveness were not being informed by well-researched, comparable data, and that many stakeholders are assuming (hoping) that exchange rates will not dramatically appreciate and that labor costs will remain low because there is a large available pool of rural unskilled labor.

1.1. UNDERPINNINGS OF MOZAMBIQUE'S COMPETITIVENESS

The focus of this paper is on the growth and sustainable competitiveness of non-extractive tradables sectors in the Mozambican economy. It is thus worthwhile discussing what we mean by competitiveness, particularly in the Mozambican context.

Leading thinkers and strategists have developed core concepts of competitiveness, perhaps foremost amongst them being Prof. Michael Porter of the Harvard Business School. Competitiveness has been the subject of discussion in Mozambique already, and numerous analyses and consultants have focused on the country's competitiveness.

At the core is the difference between comparative and competitive advantage. Comparative advantages help to generate competitiveness only if they are used to build competitive advantages. Mineral resources are a comparative advantage – they do little for an economy or the population unless the revenues from their sale are used to build competitive strengths – stronger comparative advantages or sustainable competitive advantages.

The following table, adapted from a recent study on urban competitiveness¹, describes types of comparative and competitive advantages:

Comparative Advantages	Competitive Advantages
Land availability; land costs	Labor productivity
Arable land; fertility	Process efficiencies
Taxation	Quality of product, service
Labor costs	Skills base
Raw materials	Technology
Business environment	Research and development (R&D)
Transport	Knowledge base; core competencies
Proximity to markets	Differentiation
Scenery, beaches, etc.	Social capital/trust
Economies of scale	Market knowledge
Collaborative advantages	

Minerals or gas or beaches or fertile land or labor are not competitiveness¹. The value that is added from such resources is competitiveness.

Comparative resources are hugely important in helping countries to gain footholds in global markets; for example, where businesses use comparative resources in the form of low-cost labor or proximity to markets as a basis for garment assembly manufacturing. These comparative resources are helpful, and provide a basis for building competitive advantage. But without value added through productivity, there is no growth in competitiveness. And other countries will often be able to compete with the same or better comparative strengths.

Competitiveness is measured largely by productivity, which in turn is measured by value addition. Competitiveness is seen when businesses and value chains are able to sell products and services at higher prices and greater profits (which assumes that the market is willing to pay and that competitors cannot easily imitate and thus force prices down) than competitors, or than previously. A competitive economy builds wealth for businesses, workers and economic stakeholders – and this wealth can be used to increase incomes, or to reinvest in creating even more competitive advantage (e.g. investing in better education and skills).

¹ Adapted from Chloe, K. and Brian Roberts, *Competitive Cities in the 21st Century, Cluster-Based Local Economic Development*, Asian Development Bank, Manila 2011 <http://www.adb.org/publications/competitive-cities-21st-century-cluster-based-local-economic-development>.

To be able to continue to (or begin to) sell in the context of an appreciated exchange rate, economic sectors need to be increasingly productive, or to offer unique advantages in terms of quality, differentiation, location or other factors.

Companies, value chains and sectors have to continually improve their competitiveness; they have to stay ahead of competitors who try to imitate or beat the quality, productivity or service associated with goods or services. The same applies to countries and regions, which of course are composed of these businesses, value chains (VCs) and sectors.

Productivity of investment is a useful concept relating to competitiveness, and is of course attractive to the investor. Some businesses, value chains and economies are more able than others to achieve productivity from new investment.²

Countries and regions want to build the competitiveness of their economies and the businesses (including farmers) that form the economy because:

- It attracts investment;
- It allows companies to pay employees more;
- It allows companies to invest in their employees' capabilities;
- It generates national income, which can pay for social services, further investment, education, and other desirable factors; and
- It is easier to defend against competition from a position of strength.

Diversification is also an important element of the sustainable competitiveness of an economy. In theory it's possible for a business, value chain or economy to be highly competitive through competitiveness in a single product or sector. But it is also risky to do this. Risks include downturns in prices, accidents of nature, disruptive innovations, or goods or services becoming outdated as demand shifts in line with increasing incomes. An example is Detroit, in the U.S., a location that depended too much on one sector (the automotive industry), and failed to develop other competitive advantages.

1.2. COMPETITIVENESS AND THE BUSINESS ENABLING ENVIRONMENT

The weak business and investment environment has been highlighted in Mozambique for many years. The current environment – regulations, procedures, availability and quality of services – fails to provide most business and investors with the services that they need. The current business environment imposes unnecessary costs and inefficiencies and risks on business and investors. Businesses, therefore, are unable and unwilling to plan and invest for the long term, or to, in some cases, make investments that would lead to world-class productivity. It is a principle that any aspect of the national economy or bureaucracy that adds costs or risk to investment or business operations is impeding competitiveness, and may be limiting job creation by permitting impediments to business formation and sustainability.

To the extent that domestic actors are always making choices about whether to invest further, and international investors have a choice of whether to invest in Mozambique or somewhere else, the quality of the country's business environment is a competitive factor.

Businesspeople in Mozambique are preoccupied with issues in the enabling environment. The immediacy of these issues may partly explain why business hasn't fully turned its attention to the potential competitiveness impacts of resource boom.

² This is measured by an index called "ICOR".

1.3. USING LOW COST LABOR TO DEVELOP MOZAMBIQUE'S ECONOMY

Low labor costs can be attractive to labor intensive industry, if the business environment, services, location and other elements offer satisfactory (and ideally superior) services, low operating and logistics costs, and low transaction costs. Many countries³ have used low-cost labor as a first step towards building their competitiveness.

Low cost labor typically means that there are large populations of unemployed or underemployed, which bid down wage rates. Wages can also be low in global terms in situations of a depreciated currency. Low cost labor can be a comparative advantage. But low cost labor (and the low levels of skills that that generally implies) is not a long term competitive advantage. Relying on cheap labor, other than as a way to get a foothold, means that an economy and its labor intensive businesses will have an interest in keeping wages low, and therefore will not have incentive to invest in the education and skills of its people, and will likely therefore be stuck with low levels of productivity which, over the medium- and long-term will be a serious impediment to growth.

The Economist⁴ quotes Bernard de Mandeville⁵: [It is] “manifest, that in a free nation . . ., the surest wealth consists in a multitude of laborious poor”. That perspective suggests that countries should want to keep labor low-paid. It is sad but common to see countries touting their low labor costs as a virtue.

There is need for a legitimate debate about whether, despite a potential Resource Curse, Mozambique can offer low cost labor as an advantage, and thus attract light manufacturing such as garments assembly, or labor-intensive agro-processing. Such manufacturing is likely to locate where infrastructure, logistics and services are superior – that is, at locations that will attract many of the support services for megaprojects, hence at precisely the locations where labor prices are bid up the most. However there is a tremendous labor resource that could satisfy labor-based manufacturing, especially if urban migration were encouraged. However, legislation in Mozambique obliges a minimum wage of about 70 dollars/month - not a comparatively low wage when productivity is low.

A focus on low-cost labor would typically imply relatively unskilled labor, and possibly limited investment in developing skills. In Mozambique's economy, skills are scarce, and skilled personnel are able to command increasing wages, often higher than those in countries elsewhere in the Southern African region. A competitive economy is one that becomes more complex and service oriented over time, and hence one that requires more people with high-level skills. With respect to labor, then, Mozambique will need to understand and plan for both changes in labor costs and the impact of scarcity of skilled employees.

The discussions and investigations undertaken for this paper emphasize 3 broad industries: agriculture, manufacturing and tourism – recognizing that there are many subsectors within these. These sectors were selected because they are currently large contributors to the economy and generators of livelihoods (agriculture), are considered national priorities (tourism and manufacturing), are or could be large-scale employers (and hence would be exposed to changes in labor costs), and are tradables with strong export components and global market exposure (and hence are potentially exposed exchange rate appreciation). Each has a strong stake in the country's comparative advantages, but also can benefit from strategies that build competitiveness.

Four research topics are suggested. These are briefly described below.

This mission has developed several hypotheses of how labor (as a factor of production) and subsectors within each of the three industries will be affected by appreciating exchange rates, increasing labor prices, labor scarcity and other factors.

³ Japan, South Korea, Ireland, Honduras, Costa Rica, Indonesia, Georgia and Mauritius are but a few.

⁴ The Economist, Free Exchange, Penury Portrait - The consensus on raising people out of poverty is surprisingly recent

Jul 27th 2013. <http://www.economist.com/news/finance-and-economics/21582233-consensus-raising-people-out-poverty-surprisingly-recent-penury/print>

⁵ A 17-18th Century Anglo-Dutch political economist and philosopher.

Transport costs, costs of material inputs, costs of power and other factors are likely to change, perhaps dramatically, in Mozambique's economy. The proposed research will examine and test these hypotheses, providing stakeholders with perspectives and insights to inform their debates and decision-making.

It is important to recognize that the possible developments, and their impacts, are “broad strokes”. Individual businesses, with excellent strategies, market linkage or operations, always have the opportunity to be successful. Indeed, during the discussions and meetings held for this assignment, various anecdotes were recounted about businesses that are successful or are investing in subsectors that are nonetheless hypothesized to come under competitive pressures.

2. A THREE SECTOR FOCUS

2.1 RESEARCH TOPIC: PROSPECTS FOR TRADITIONAL AGRICULTURAL EXPORT VALUE CHAINS IN THE CONTEXT OF MOZAMBIQUE EXTRACTIVE RESOURCE BOOM

HYPOTHESIS

Traditional value chains include sugar, cotton, tobacco, coconut, and cashew. These crops/products are globally traded commodities, and prices are thus set globally – Mozambique can do little to influence the global prices. Per unit revenues in Metical terms will be reduced because of appreciating exchange rate. However, appreciating exchange rates will lower the cost of imports, so the import component of production will also be reduced. Labor demand from businesses in the extractive industries and an increasingly robust service sector will likely bid up wages, particularly for employees with skills; increasing labor costs in the tradeables sector will pressure margins. Small farmer incomes will be squeezed, and the farmer will switch crops if s/he can.

Producers supplying the local market will tend to receive higher prices, because demand will increase; this may in turn trigger greater production and moderated prices.

An appreciating exchange rate will reduce costs of imported inputs. The cost of locally sourced inputs, on the other hand, will rise.

Mozambican smallholder agriculture has to dramatically improve its productivity, market access, and expansion of productive areas. Continued agricultural competitiveness will rely heavily on Mozambique's ability to substantially improve productivity in the agricultural sector.

KEY PERSPECTIVES AND DATA POINTS TO INVESTIGATE

- Examine the value chains' pricing structures and risk mitigation measures (Take into account the substantial price fluctuation in agricultural products). How will these stand up to pressures?
- What options are available for increased productivity? How are firms preparing for this?
- Price or profit advantage can be obtained by quality improvements (a form of productivity). What would it take to achieve this? What would be the potential impact of quality/price improvements on the cost structures?
- Benchmark subsector cost structures against those in other countries.
- Is there/how much flexibility is built into the system because of transfer pricing arrangements? Will that provide some buffer to relieve sourcing price pressures?
- How have other producer countries fared and reacted in the face of such pressures?
- What's the counterfactual – what pressures/investments/evolutions would have been expected in the industry in the absence of these pressures?

Note on increasing productivity via commercialization of agriculture: Mozambicans interviewed are aware of the need to increase productivity in agriculture and upstream agribusiness, and “commercialization” seems to be a “mantra”. “Commercialization” does require definition, however. In the Mozambican context, “commercialization” refers to farm-to-market systems that include scale economies, exposure to and transmittal of market-based incentives and pressures, and market access through downstream intermediaries. Greater commercialization of agriculture is viewed as a mechanism to promote greater productivity and consequently, both competitiveness of agricultural value chains and increased rural incomes. Competitive Mozambican agriculture will need to respond to pressures developing from the resource boom by substantially increasing agricultural productivity, at the producer level and throughout the value chain.

Detailed examination of the possible improvement of agricultural productivity may be beyond the scope of SPEED’s (Support Program For Economic and Enterprise Development) analysis. However, it is worthwhile emphasizing that understanding several factors will be important to assessing the evolution of the competitiveness of Mozambique’s agricultural sector. Examples include: yields, value added, profitability of the value chain and actors in the value chain, prices received and quality. Greater productivity will require strong and self-sustaining producer-buyer linkages that facilitate transmission of incentives, information and inputs. How will these be affected by exchange rates and labor costs?

2.2. RESEARCH TOPIC: TOURISM DEVELOPMENT – ACHIEVING A NATIONAL PRIORITY IN THE FACE OF MOZAMBIQUE’S EXTRACTIVE RESOURCE BOOM

HYPOTHESIS

Tourism development is a national priority, and hence requires specific attention. Mozambique possesses comparative advantages (natural assets) that could provide the basis for the country to develop a destination (leisure, adventure, cultural, wildlife, etc.) tourism industry. But much investment will be needed to further establish the industry.

Mozambique’s tourism industry requires lots of imported goods, both for investment and ongoing operations. Mozambique will most likely be slow to replace such imports with locally produced products. Much tourism is paid for in foreign currency as part of a package arrangement, and this may dampen the cost advantages of imports in a situation of an appreciating exchange rate.

As a labor-intensive industry, tourism will face not only general rising labor costs, but rising costs for skilled labor. And unless Mozambique can establish itself in a part of the market that is not price sensitive (presumably high end tourism), or perhaps as an add-on to regional tours⁶, then this part of the tourism market will be inaccessible in the near and medium term.

There is growing demand for business related tourism services – e.g. transport, hotels, restaurants, entertainment, and purchases – for personnel linked to investment and operations in the extractive sectors. This market will also provide demand for easily accessed leisure tourism. There is a sequencing opportunity – i.e. using leisure tourism for business tourists as a step towards developing facilities and services needed for high value regional and international leisure tourism.

With increasing incomes, Mozambicans will also be interested in domestic tourism opportunities. The infrastructure that caters to domestic tourism will have appeal to some elements of the regional and international market as well.

⁶ A rationale that was expressed in several meetings would be that Mozambique offers a “different” destination than the mature, established locations such as South Africa and Kenya, and that Mozambique would be an excellent “add-on” destination.

KEY PERSPECTIVES AND DATA POINTS TO INVESTIGATE

- Describe the main tourism segments pertinent to Mozambique.
- How will each of these be affected by exchange rates and labor costs? Which cost elements will change?
- Identify in particular the labor component of various tourism businesses, and how changes in the labor market will impact tourism affordability and profitability.
- What will be the impact on the costs of locally imported goods? How will this change the attractiveness of the tourism industry for Mozambique? How will it impact the possibility of Mozambican producers increasing their supply of inputs to the industry?
- Examine the experience of other countries affected by resource booms. How have they been affected? What strategies have been successful?

In this analysis, it will be important to recognize that tourism is not yet a firmly established sector; and in particular, skills and services are still weak.

2.3. RESEARCH TOPIC: THERE ARE SEVERAL POTENTIAL MANUFACTURING SUBSECTORS – WHICH CAN BE SUCCESSFUL IN THE CONTEXT OF MOZAMBIQUE’S EXTRACTIVE RESOURCE BOOM?

The analysis will consider several types of manufacturing— e.g. light manufacturing, resource-based manufacturing, agro-processing and agro-industry, and manufacturing for regional markets.

HYPOTHESES

Light manufacturing and more capital intensive manufacturing for export would most likely depend on importing materials or components and exporting assembled or processed products. If manufacturing is based on assembling or transforming imports for re-export, the advantages of lower costs of imports would not be strong, because the import component is just re-exported. Labor costs would increase, however, and this would have particular impact on the profitability of labor-intensive light manufacturing.

Manufacturing that depends on a natural resource (e.g. local power and minerals) will more likely be insensitive to labor availability or costs. Appreciating exchange rate may put Mozambique at a comparative disadvantage to other resource-rich locations – but scarcity of such resources may be a strong mitigator.

Manufacturing for the region may hold promise, if transport service and availability is robust. On purely geographic terms, southern Tanzania, Malawi, Zambia and perhaps Zimbabwe all offer opportunities of proximity, particularly if South African transport infrastructure is overstretched and its labor costs are high. However the business model would have to be robust to overcome South Africa’s head start in terms of skills, manufacturing infrastructure and logistics. Mozambique’s labor may be low cost compared to that of South Africa but the impact of transport costs and efficiencies, such as through corridor linkages, would be an important driver of a region-focused subsector.

Agro-processing, adding value to Mozambique’s own-grown products, or regionally-produced products, has a strong logic, as long as agricultural productivity and processing productivity are strong and continue to improve. It would bring forward natural value chain processes. Transport costs would be minimized in terms of distance. There would be a strong logic to FDI (Foreign direct investment) as well as domestic investment.

KEY PERSPECTIVES AND DATA POINTS TO INVESTIGATE

- Develop the cost structures of various value chains and enterprises. Compare costs of various production factors with international benchmarks.
- Perform a cost analysis from a competitiveness perspective that highlights costs impacted by labor and exchange rate.
- Discuss the availability of infrastructure – possible “competition” for infrastructure availability with extractives along corridors.
- There are some instances reported of fairly recent garment industry investments. What is their strategic/financial rationale and are they competitive?
- Sensitivity analyses to highlight impact of exchange rates and labor costs.

2.4. RESEARCH TOPIC: IMPACT OF RISING LABOR COSTS ON SEVERAL VALUE CHAINS

This topic examines the expected impacts of labor costs across several sector and business models.

This topic will also provide understanding of the likely response of rural populations to new opportunities in non-tradable industries, and hence the cost and availability of labor for agriculture and manufacturing.

2.4.1 HYPOTHESIS

Rising labor costs will put pressure on the costs of goods and services, in particular in labor intensive sectors such as non-mechanized agriculture, tourism, labor intensive manufacturing, construction, etc. Businesses will have to absorb these extra costs (reducing unit profits), achieve greater labor or other productivity – or go out of business. Many businesses (and value chains) will not be able to vary their prices in the face of global prices or imports.

An alternative hypothesis is that rural labor will be largely insulated from these higher-wage labor markets, and hence agricultural production should not face significant labor-related pressures, and low cost labor will continue to be available for labor-intensive manufacturing. However, labor entering the manufacturing sector will be paid minimum wage that is comparatively high and that will rise over time - real wages are rigid downwards and possibly too high in comparison to other countries.

KEY PERSPECTIVES AND DATA POINTS TO INVESTIGATE

- Early value added investment in developing countries is very often based on the availability of low-cost labor. Such investment will be inhibited in Mozambique. That will apply to FDI as well as domestic investment.
- Examine the labor cost component of several value chain/business cost profiles. Which sectors are likely to be heavily affected?
- How does the labor component in Mozambican subsectors compare to that of competitor countries?
- Which sectors are more robust by being able to increase prices? How will they respond to labor scarcity and labor price increase?
- Labor costs will have already increased in some regions of the country. What has been the sector experience in those regions? What responses are already being seen?
- What responses have been seen in other countries that have experienced labor price increases?
- What are the available options to increase productivity in the affected sectors?
- Which policy options are available to address these issues?

3. A CONCLUDING NOTE

Four research topics are proposed to further examine the likely impacts of Mozambique's resource boom on the competitiveness of tradables sectors in the country's economy. The information and hypotheses were developed on the basis of available reports and detailed discussions with Mozambican stakeholders.

Many factors other than the resource boom will affect the competitiveness and success of Mozambique's tradable economy. Of particular importance will be the quality of the underlying business enabling environment, policies that specifically impact each sector, Mozambique's success in attracting globally competitive private investment, and the quality of the strategies adopted by businesses individually and collaboratively. While not specifically directed to these additional factors, the proposed research will also contribute to improved understanding of these factors.

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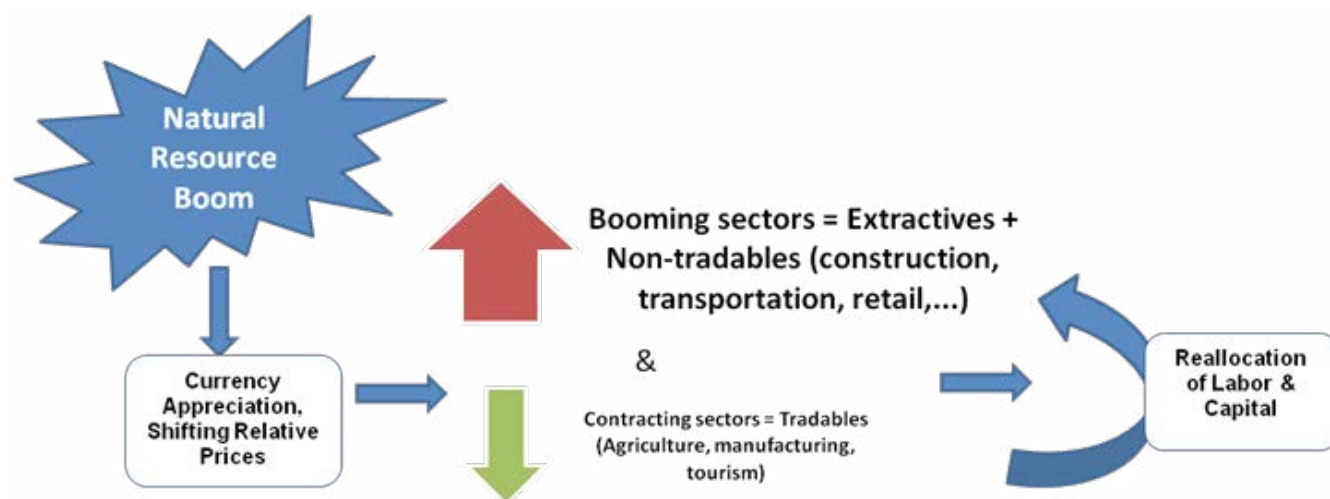
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CHAPTER 2.2
MOZAMBICAN LABOR MARKETS IN
THE FACE OF A NATURAL
RESOURCE BOOM:
WHAT POTENTIAL IMPACTS OF
DUTCH DISEASE?

Lynn Salinger and Caroline Ennis
December 2011

EXECUTIVE SUMMARY

Around the world, natural resource export booms have often led to significant economic realignments, even virtual elimination of some sectors of the economy. Natural resource exports lead to surging foreign exchange receipts, which cause the value of the local currency to strengthen and shifts relative prices between tradable goods and non-tradable goods and services across sectors.



Experience elsewhere suggests that labor and capital are often reallocated in response to these shifting incentives, away from so-called “tradables” sectors (traditional export and import-substitution sectors such as agriculture, manufacturing, tourism) into the extractives sector and “non-tradables” sectors (service sectors that support the expanding natural resource boom such as construction, transportation and other infrastructure, food retail, etc.).

Given similar experiences elsewhere in Africa and around the world, what are the likely impacts of such strong macroeconomic forces in Mozambique on the labor market and in the traditional tradables sectors? And what can be done to manage these such that the maximum benefit accrues to Mozambique?

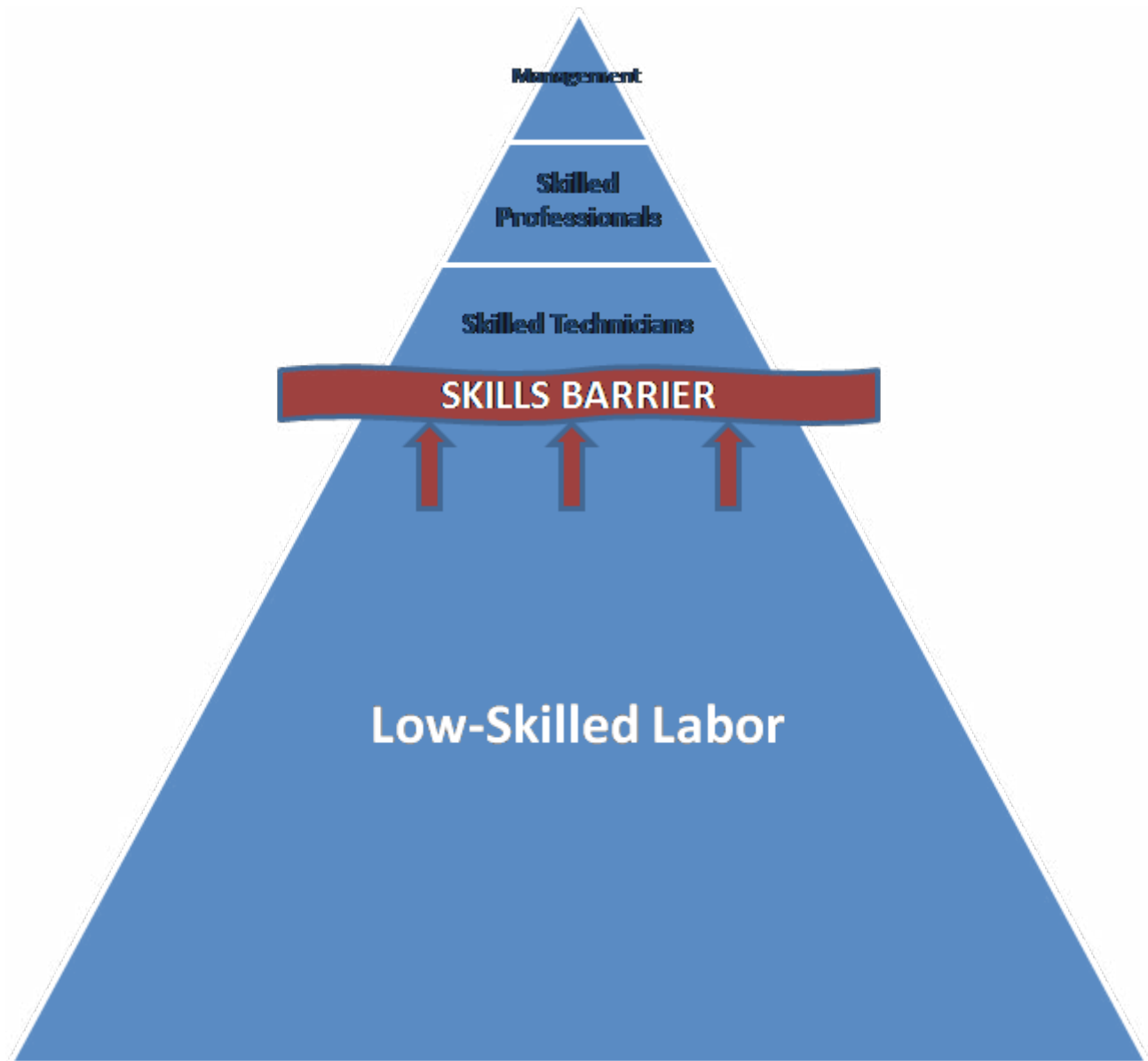
The USAID/Mozambique-supported Support for Enterprise and Economic Development (SPEED) project has launched a series of investigations to explore these questions. In mid-March 2014 two economists sought qualitative and quantitative information from representatives of government, private sector, and labor organizations to understand the structure, behavior, and policies governing the labor sector in Mozambique today in order to anticipate possible labor market impacts of the natural resource boom on employment and wages in the short- to medium-term future. Feedback received from a wide range of stakeholders at a workshop held in June 2014 has been incorporated into this report. Complementary assessments of potential impacts of the so-called “Dutch Disease” on agriculture, manufacturing, and tourism are also underway.

Findings from the labor assessment include the following:

1. The natural resource boom is already unfolding in Mozambique, although the full extent of the macroeconomic phenomenon known as Dutch disease is unlikely to be felt in full force for some time. Already, upward pressures on housing and commercial real estate markets, as well as in markets for skilled labor, are in evidence.
2. Segmentation of labor markets in Mozambique today – management, skilled professionals, skilled technicians, on the one hand, and low-skilled labor, on the other – is significant. The labor assessment team heard numerous accounts of the tight available supply not only for managers and other skilled professionals, which is to be expected, but also in the category of skilled technicians, i.e., workers whose occupations require training, apprenticeship, and (possibly) certification. This puts great pressure both on skilled labor wages, for which an increasing premium is

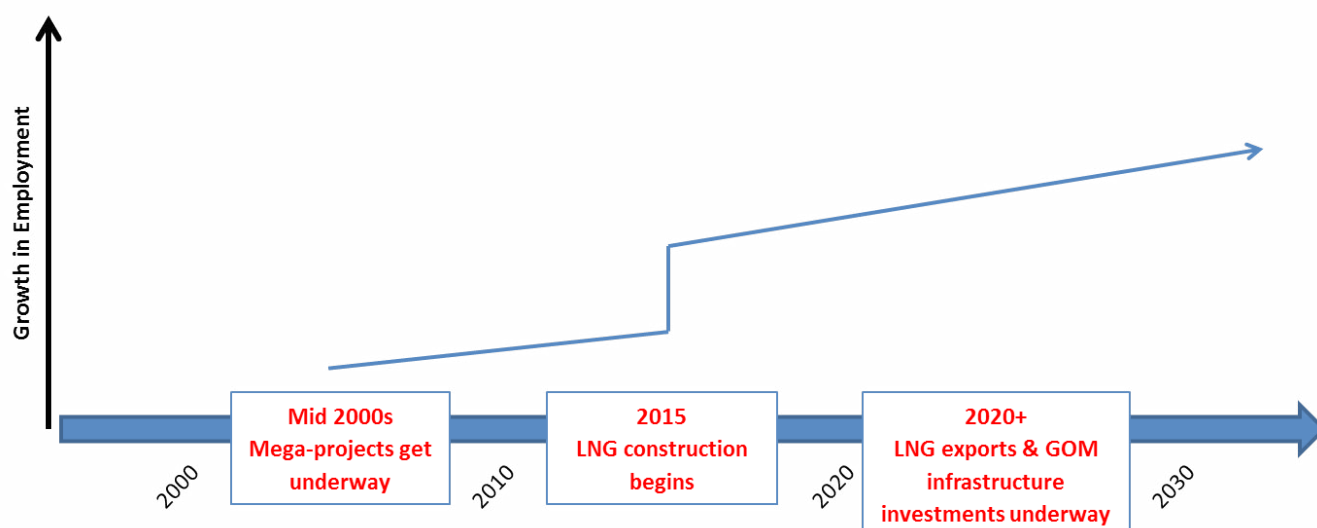
being paid in Mozambique's labor market today, and on the foreign labor quota system, which presently regulates the volume of workers that may be "imported" from off-shore to compensate for the present skills gaps.

3. Due to real skills barriers low-skilled labor is largely NOT substitutable for the labor required by the extractives and other associated, surging sectors of the economy. Four-fifths of the workforce is rooted in the agricultural sector, where poorly educated, largely illiterate Mozambicans work hard to earn their livings. This unskilled labor pool lacks both the "soft employability" as well as the technical skills required by formal sector employers. Since rural labor is unlikely to be hired into the extractives or non-tradables sectors in significant numbers, the expected impact of possible Dutch Disease on wages in the rural sector is likely to be minimal.



4. Yet the witnessed acceleration in mega-project approvals in Mozambique has raised expectations that the extractives industry will provide new jobs for Mozambicans. It has, and it will, but only for a small number of skilled workers. The government of Mozambique would do well to emphasize that the country's economic future will depend on trained or educated workforce development. This message is not well understood by the public and needs to be broadly disseminated to encourage rational decision-making about labor migration, small business growth and investments near extractive industry locations, and even delayed school-leaving in favor of more education and skills-building.

5. In the short run, skilled labor demand will be met through “imports” of foreign workers. In the longer run, it can make strategic sense for employers and government to partner in the development of education and training opportunities for Mozambicans to supply skilled technician and professional job candidates in the coming decade.
6. Nonetheless, it is likely that some of the more ambitious or entrepreneurial will seek to move to areas of resource extraction activity. It is thus all the more crucial that the business environment – by which we mean regulations and their uniform implementation, as well as the availability of financing – be made conducive to establishing household enterprises that are likely to spring up around mining and other extractives’ sites.
7. It is impossible to predict levels of expected investment spending by government, the extractives industries, and other private investors. But the greater potential for resource boom-led job creation lies in labor-intensive public works projects financed by public revenues and the growth to be generated by associated private investment. Again, the skills required to service those investments are highly concentrated in the vocational trades, whose training investment needs to be planned and implemented with great urgency.
8. Under Dutch Disease pressure, as the value of the metical strengthens and profitability is squeezed, companies will be forced to review their cost structures. Companies will have to consider, inter alia, whether to retrench some percentage of their workforce, switch to less expensive imported labor, or invest in labor-saving machinery, which will be less expensive, in metical terms, in the wake of currency appreciation. Human capital development, upskilling of workers, and investments in higher value-added sectors of the economy will be needed if those higher wages (expressed in dollars or euros) are to be deemed affordable by investors.
9. In the longer run, Mozambique’s competitiveness will be enhanced not by requiring companies to use low-skill Mozambican labor, but by investing in a high-skilled Mozambican workforce. For Mozambique to successfully employ its natural resource “blessing” to embark on structural economic transformation, creating new industries and services employment opportunities for the country’s future workforce, it must invest now in its people. This needs to be done in an integrated and coordinated way, if possible through an employment policy that puts job creation at the heart of government activities. As described in the full report, labor market efficiency and how the economy responds to Dutch Disease pressures depend on the extent to which barriers impede movement between segments of the labor market and how well information about the labor market opportunities is transmitted. Labor market information – present and expected labor demand and supply; wages by region, sector, and occupation; skills and certification requirements by occupation; working conditions – is extremely hard to come by, not only for expected labor market entrants, but also for workers already in the labor market who seek to change their work portfolios. Currently little information is available – on career options, employment opportunities, income-earning potential, or training requirements – to offer youth reasons to stay in school and choose particularly in-demand skills to learn.



If a more comprehensive training effort is not mounted, the economy will likely not enjoy a strong bump-up in the level of employment (Scenario 1 in the graphic above). Under such a scenario one might imagine various winners and losers from the natural resource boom, as summarized in the matrix below.

	'Winners'	'Losers'
Exchange Rate Effect	<ul style="list-style-type: none"> ▪ Consumers of imported goods ▪ Importers ▪ Companies that use mainly imported raw materials and inputs 	<ul style="list-style-type: none"> ▪ Agriculture (producing for export or to substitute for imports) ▪ Exporters ▪ Alternative investment opportunities
Boom Effect	<ul style="list-style-type: none"> ▪ Skilled people ▪ Extractive industries ▪ Suppliers to the extractive industry ▪ Transport ▪ State and tax authority ▪ Service providers – e.g., hairdressers ▪ Construction & construction material producers ▪ Banks 	<ul style="list-style-type: none"> ▪ Unskilled people without access to training ▪ Farmers ▪ SMEs ▪ Manufacturing firms ▪ Tourism companies

If training efforts only remain focused on the skilled technicians needed for rapid expansion of the extractives industry, there will be a short-term bump-up in employment, with longer term expansion continuing at an unchanged rate (Scenario 2). However, coupled with government and private sector investments to promote growth in other, labor-intensive sectors of the economy (infrastructure development, real estate, in addition to investments to increase productivity and innovation in traditional tradables, such as agriculture, manufacturing, and tourism), Mozambique should be able not only to enjoy a short-term bump-up in employment but also to embark on structural transformation of the economy that will enjoy accelerated level of employment growth over time (Scenario 3).

The likelihood of success in achieving Scenario 3 will be enhanced if the Mozambican government finalizes its National Development Strategy, targeting a strategy to allocate future revenues from natural resource exports to grow the economy by investing in labor-intensive sectors, the returns to which will position the country for dynamic, structural transformation. Building transport, trade, and telecommunications infrastructure, providing support to labor-intensive agricultural schemes, luring investments for labor-intensive manufacturing, and expanding human capital investments to raise literacy, numeracy, technical, and management skills, will provide the foundation for Mozambique to capture benefits from, rather than be undone by the Dutch Disease effects of, an expanding extractives industry over the next two decades.

Section 1 of this report presents an overview of the economy, the rising importance of extractive industries within it, the macroeconomic concerns that may arise in association with natural resource booms, and a sample of Dutch Disease experiences elsewhere. Section 2 offers a conceptual model of labor markets in Mozambique, highlighting the various dimensions for consideration by the study. Quantitative parameters culled from existing sources about the Mozambican labor force, employment, labor mobility, incomes, labor institutions, minimum wages, and the informal sector and household enterprises are detailed in Section 3. Findings from the assessment about the role of labor in overall development strategy, labor skills categories and constraints, technical and vocational education and training, labor mobility, and labor market information are discussed in Section 4. To conclude the report, expected impacts of Dutch

Diseases on labor markets in Mozambique are summarized in Section 5. Annexes to the main body of the report provide the reader with a list of all interviews held (A) by the investment team and a bibliography of sources consulted for the report (B).

1. OVERVIEW

The purpose of this study is to explore the potential impact of Mozambique's coming "natural resource boom," its potential appreciation of the metical, on relative prices across tradable and non-tradable sectors of the economy, and, as a consequence, its potential impact on the Mozambican labor market and overall economic competitiveness. Complementary studies are being or expect to be undertaken under the aegis of the SPEED project to evaluate these impacts on the competitiveness of Mozambican agriculture, tourism, and manufacturing.

As seen in Table 1 below, the primary sector still provides a significant, and rising, component of GDP. The figures suggest that Mozambique has not yet embarked on structural transformation of its economy that would be reflected in rising shares for and rising formalization of industry and services (Rodrik 2014).

TABLE 1: SECTORAL COMPOSITION OF MOZAMBIQUE'S GDP

Sector	2006	2011e
Agriculture, forestry, fishing, hunting	27.9	31.5
Mining and quarrying	1.4	1.5
Electricity, gas, water	5.8	4.5
Construction	3.2	3.1
Manufacturing	16.0	13.0
Trade, hotels, and restaurants	15.5	18.9
Transportation and communication	10.0	10.0
Finance, real estate, business services	8.9	8.6
Other services	7.3	4.7
Public service	4.0	4.1

Source: African Development Bank & OECD, African Economic Outlook, 2013

1.1. EXTRACTIVE INDUSTRIES IN MOZAMBIQUE

Mozambican policy makers have begun to prepare for the effects of significant expansion of extraction industries. A 2005 selected issues report by the International Monetary Fund (IMF) mentioned only three "megaprojects"¹: the hydroelectric plant at Cahora Bassa (Tete), the Mozal aluminum smelter just outside of Maputo, and the Sasol pipeline (Inhambane) bringing natural gas to South Africa. Output from Mozal in 2013 still accounts for 75 percent of Mozambican manufacturing output and almost 50 percent of exports (ROM/MPD/DNEAP 2013). However, in 2013 the extractive industry was the fastest growing sector in the economy by far, growing at a real rate of 38.2 percent.

¹ The term "megaproject" is defined as "large, generally foreign-owned, and capital-intensive enclave activities that rely on extracted resources and/or imported intermediate goods, and export almost all of their production" (IMF 2013, 64). KPMG International (2013) also provides an overview of the mining sector in Mozambique.

The IMF's 2013 Article IV staff report highlights the importance of "preparing for natural resource management," foreseeing significant expansion of coal and natural gas investment, extraction, and export from Mozambique, identifying six megaprojects as now active in Mozambique (IMF 2013), with several new megaprojects foreseen.

Rich coal deposits are being exploited in northern Mozambique, in the Moatize, Lower Zambezi, and Mucanha-Vusi basins of Tete province, and also planned in Manica and Niassa provinces. Coal production in 2013 increased significantly with three additional mining companies (Rovubwé, Nkondezi, and Midwest) entering into production. Meanwhile, Rio Tinto increased coal production in the Benga mine by 230 percent.

Natural gas fields have been identified in the Rovuma Basin off the Cabo Delgado coast in the northeast. Licenses awarded in 2006 for deepwater gas and petroleum exploration off the northern coast have resulted in several significant natural gas discoveries made by a consortium led by the Italian firm ENI and the American energy company Anadarko Petroleum Corporation. In late 2012 they announced plans to develop onshore liquefaction facilities in Palma, Cabo Delgado province, just south of the Tanzanian border. Bids have been submitted to the consortium for construction of what is expected to be the world's second-largest liquefied natural gas (LNG) plant, after facilities in Qatar. Construction designs are being developed for the first two of a possible ten liquefied natural gas "trains," or plants. Construction is likely to start in 2015, with commercial exports theoretically planned to begin in 2018. Under current scenarios revenues to government would start flowing in the early 2020s.

In 2002 the Anglo-Australian mining group Rio Tinto began its mineral sands project in Mozambique and in 2011 it acquired a coking-coal project from Riversdale Mining Ltd. In 2004, the Brazilian mining company Vale won its first concession for a greenfield coal extraction project; its Moatize mine launched production in 2011. The Irish firm Kenmare Resources plc has been mining heavy sands in Moma, Nampula province, for titanium and other minerals since the mid 2000s.

Thus in 2014 numerous Mozambican and international companies are exploring, extracting, processing, and/or exporting aluminum, coking and thermal coal, natural gas, gold, and other minerals. Infrastructure issues notwithstanding, the IMF foresees that extraction industries will contribute an additional 2 percentage points of economic growth annually in the coming decade and raise the extraction sector's contribution to GDP to about 20 percent by the 2020s (IMF 2013, 68). Over the next ten years, government revenue impacts are expected to be modest as infrastructure constraints in coal are addressed and major construction projects for LNG exports get underway. In the longer run, however, the IMF suggests that nearly one quarter of government revenues, or 9 percent of non-coal, non-LNG GDP, could be derived from taxes on the extraction sector.

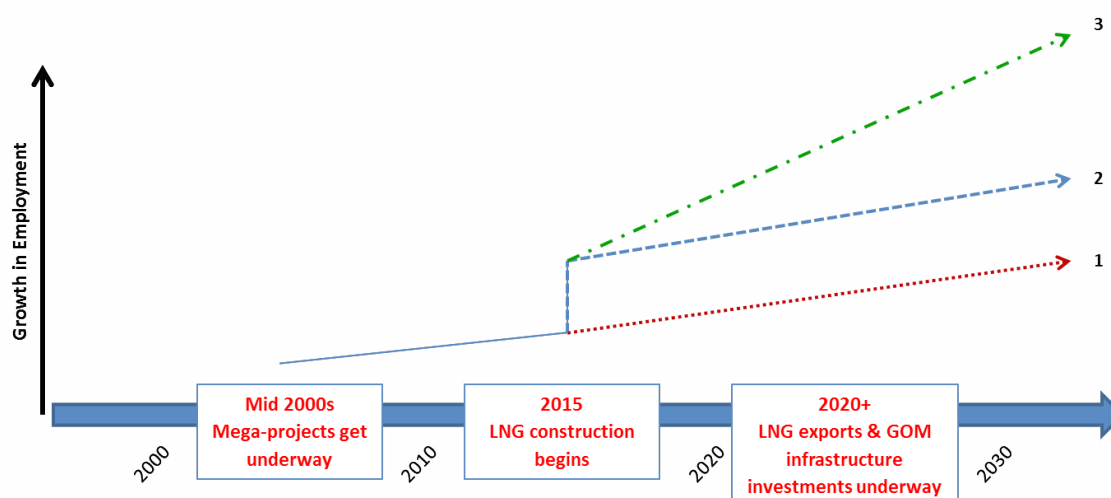
In addition to the extraction activities themselves, infrastructure investments are being made in utilities, transportation, and port facilities, as well as in expanded housing and commercial services to support the extraction sector. The boom, therefore, will result in highly anticipated inflows of revenues to government, domestic spending by the extractive industries and by the government, and – stylized below in Figure 1 and nuanced later in the report by possible scenarios in Figure 12 – some degree of job creation. Employment growth is expected both directly in the mining sector and indirectly in supporting sectors.

However, natural resource booms often bring potential negative repercussions for the domestic economy that need to be managed and planned for, some of which are explored in this report.

² The Republic of Mozambique (ROM)'s National Hydrocarbons Company and Sasol, a South African energy group, jointly own the cross-border natural gas pipeline.

³ Robbins and Perkins quoted mining company officials' declarations of willingness to be patient in finding solutions to road, rail, and port deficiencies, given the scale of coal reserves found in Mozambique (2012, 230).

FIGURE 1: EXPECTED TIMELINE OF GROWTH IN EMPLOYMENT

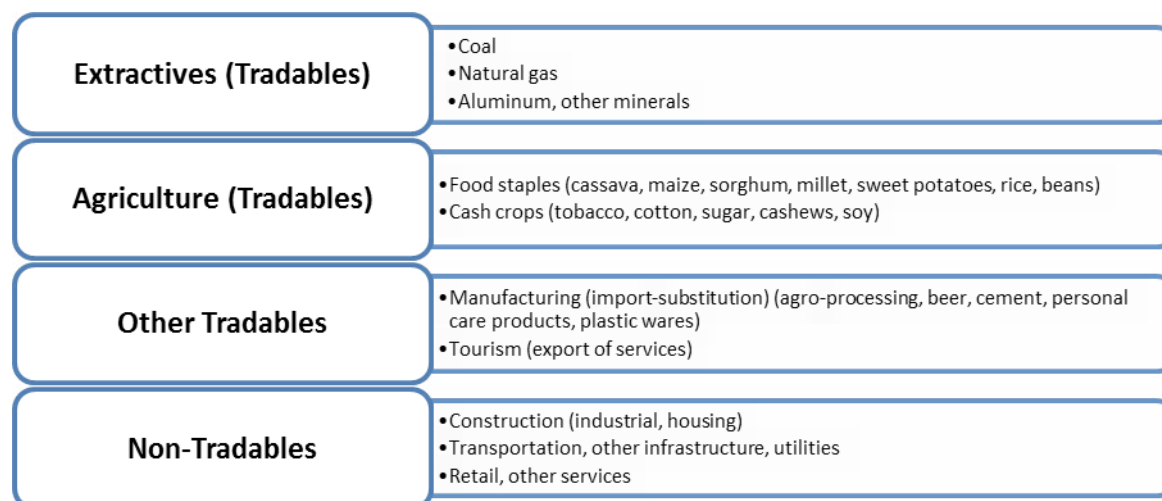


1.2. NATURAL RESOURCE BOOM AND MACROECONOMIC CONCERNS

Macroeconomic concerns arise when these natural resource booms occur. Appreciation of the local currency's value is one classic manifestation of so-called "Dutch Disease," a phrase coined by The Economist in 1977 to describe the impact of natural gas exports on Holland's economy⁴.

In analyzing Dutch Disease economists think of an economy as being comprised of the natural resource ("extractives") sector, other "tradables" sectors (such as manufacturing, tourism, and agribusiness), and "non-tradables" sectors (such as construction)⁵:

FIGURE 2: COMPOSITION OF THE MOZAMBICAN ECONOMY



⁴ Dutch disease can arise from sudden foreign exchange inflows due to phenomena other than resource booms, such as increases in foreign aid inflows or remittances from guest workers abroad. For an easy-to-access discussion of natural resource "curses," see "The Natural Resource Trap" in Collier (2007). For an excellent overview of policy responses to natural resource booms, see Frankel [2010, reprinted in (2012)]. Frankel (2010) notes that the form of exchange rate regime affects the kind of macroeconomic impact that such a boom can have on a macroeconomy. Nominal appreciation of the local currency is experience in response to a resource boom when the exchange rate regime is flexible, whereas a fixed exchange rate regime will instead result in inflation. In its 2013 memorandum of economic and financial policies to the IMF, Mozambique reiterated its commitment to a flexible exchange rate regime. The Bank of Mozambique monitors evolution of the real effective exchange rate (REER), i.e., the trade-weighted exchange rate of the metical vis-à-vis trade partners' currencies, adjusted for relative levels of inflation. To date, the REER has fluctuated +/- 20 points around 100 over the past ten years, and is presently somewhat appreciated (REER index of about 110), suggesting possible onset of currency appreciation in the face of rising coal exports (IMF 2013, 19).

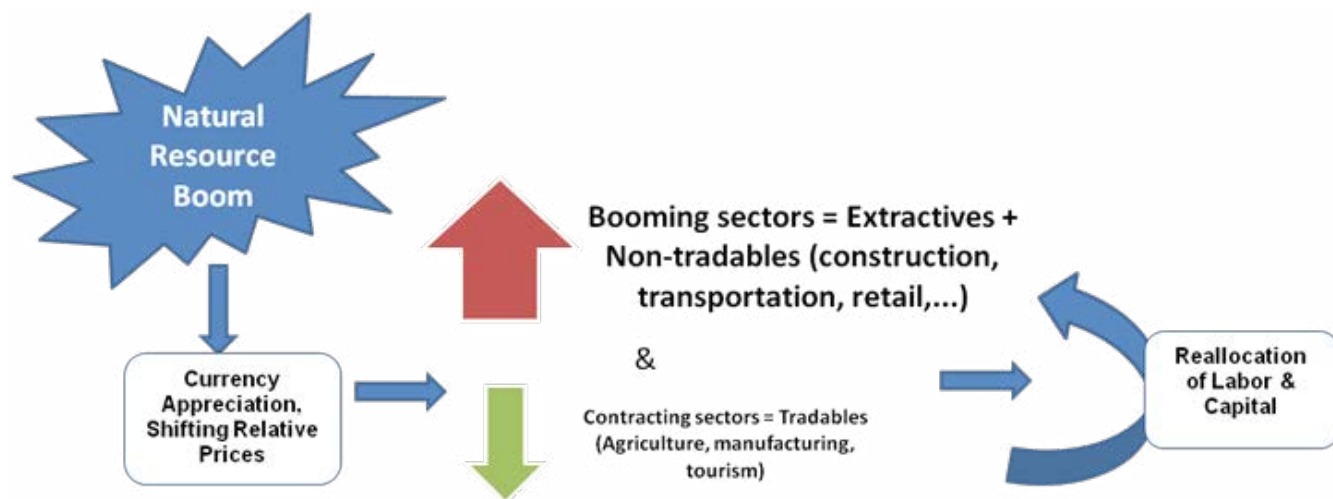
⁵ Corden and Neary (1982) were among the first to describe the co-existence of booming and lagging subsectors in one economy in the wake of such a resource boom. Exploring several examples, e.g., minerals from Australia, natural gas from the Netherlands, and oil from the United Kingdom, they note that the traditional manufacturing sectors faced negative pressures in each instance. They extended their analysis to include examples where traditional manufacturing is confronted with more technologically and economically successful sectors, as in Ireland, Japan, and Switzerland, where they observe similar impacts.

The economics literature offers various explanations for the mechanisms that lead to real appreciation of the currency. Some point to increasing inflows of foreign exchange revenues that seek to “buy” local currency as the catalyst that pushes up the price of the local currency⁶. Others point to increasing domestic expenditures out of natural resource revenues on non-tradables, such as construction and infrastructure investments, which pushes up the prices of non-tradables, relative to those of tradables⁷.

We are unaware of any estimates forecasting the potential impact of surging foreign exchange inflows into the Mozambican economy on the expected REER⁸. Given sizeable government revenue forecasts, future appreciation of the metical is potentially orders of magnitude greater than the 30 percent recent past levels of appreciation relative to the dollar, estimated by Biggs (2011).

When currency appreciation takes hold, the domestic price of imports – for example, prices in metical of imported or importable foods such as maize and rice or prices of imported fertilizers and other agro-inputs – will fall, as it will take fewer units of domestic currency to buy one unit of foreign exchange. This also means that the domestic prices of exports – sugar, cotton, tobacco, coconut, cashews, etc. – or exportables – clothing, wood products, and other manufactured goods – will fall, too, as international prices, determined by international markets and expressed most commonly in dollars, are converted with fewer units of domestic currency into domestic price equivalents. Thus, incentives to increase imports of cheaper goods and inputs will increase and incentives to produce import-substituting products or export (of goods other than the natural resources that caused the boom in the first place) will decrease. Note that the impact is felt not only on products the country actually exports or imports – but also on those produced for the domestic market. For example, a country may produce cassava purely for domestic consumption, but this competes in the consumption basket with grains that may be imported. When this happens, the relative prices of goods and services bought and sold in local, non-tradable sectors rise. Incentives to reallocate labor and capital into construction, transportation, retail, etc. will increase, as depicted in Figure 3.

FIGURE 3: THEORETICAL IMPACTS OF DUTCH DISEASE ACROSS SECTORS



As relative incentives to engage in the extractives and non-tradables versus traditional tradables sectors shift, employment and wage effects may be noted. The demand for labor in the former, i.e., extractives and non-tradables, will increase and wages will rise. The extractives industries, however, are capital-intensive industries that do not usually create significant new, direct employment opportunities (Kaplan 2013).

⁶ “What starts essentially as a foreign exchange problem with the appreciation of the local currency (as a result of a massive influx of revenues from the sale of hydrocarbons)...” (Ziyadov 2012, 358-359).

⁷ “One of the possible harms of an oil export boom is that the rise in oil earnings leads to increased public and private spending, which in turn leads to a sharp appreciation of the real exchange rate,...” (Sachs 2007, 181).

⁸ The Governor of the Bank of Mozambique acknowledged these risks in an address to an annual research conference (BM 2013).

It is more likely that employment in indirectly affected sectors may increase, either through local spending by extractives in supporting goods and services or through increased spending – on infrastructure by government, fueled by revenues generated by extractive activities, or by the private sector, in response to perceived new business opportunities generated by the extractive industry.

Assuming that labor is mobile across sectors of the economy, there may be indirect employment and wage effects perceived in other sectors of the economy as well as labor is drawn from other sectors of the economy. Wages in the traditional exportables sectors, for instance, could rise, if labor is drawn out of agriculture, tourism, or manufacturing and into extractives and non-tradables. If labor flows out, wages may rise, leading to higher labor costs for employers. Depending on the value chain and the importance of the wage bill in it, higher wages might then have a negative impact on competitiveness.

Frankel describes Dutch Disease as initiated by “a strong, but perhaps temporary, upward swing in the world price of the export commodity,” which in turn leads to:

- “a large real appreciation in the currency (taking the form of nominal currency appreciation if the country has a floating exchange rate or the form of money inflows and inflation if the country has a fixed exchange rate)⁹;
- an increase in spending (especially by the government, which increases spending in response to the increased availability of tax receipts or royalties –discussed below);
- an increase in the price of non-traded goods (goods and services, such as housing, that are not internationally traded), relative to traded goods (manufactures and other internationally traded goods other than the export commodity);
- a resultant shift of labor and land out of non-export-commodity traded goods (pulled by the more attractive returns in the export commodity and in non-traded goods and services); and
- a current account deficit (thereby incurring international debt that may be difficult to service when the commodity boom ends).” (2010, 19)

Further, Frankel notes, if the crowded-out tradable goods are concentrated in the manufacturing sector, de-industrialization can take place.

If the resource boom can be sustained over an extended period of time, the shift of resources out of traditional exports and into natural resource extraction and non-tradable sectors may not be considered adverse. Many economists, however, value the productivity improvements that competitive production for the world market encourages, suggesting there are long-run, economic costs to reductions in traditional export activities.

However, Dutch Disease’s macroeconomic impacts are not inevitable. Revenues can be consumed at once, with attending negative consequences, or they can be isolated from the domestic economy to minimize pressure on the domestic currency or invested in stabilization funds to yield income and be harvested in a more deliberate manner in the future. If 100 percent of the new foreign exchange earnings are spent abroad on imports, there will be no impact on the local currency market¹⁰. Alternatively, negative impacts can be forestalled through prudent government fiscal policy. For example, countries may establish sovereign wealth funds offshore to minimize the impact of incoming foreign exchange on the exchange rate, or set in place strategic investment programs to develop competitive strengths outside of the extractives industry, or a combination of both. It is not the purpose of this paper to review those policy measures. A few examples of Dutch Disease experiences are compared next.

⁹ In either case, as pointed out by Ebrahim-zadeh (2003), real exchange rate appreciation occurs, weakening the competitiveness of exports, especially traditional exports unaffected by the boom. Mozambique’s exchange rate regime can be characterized as a managed float.

¹⁰ Ebrahim-zadeh (2003).

Bevan, Collier, and Gunning (BCG 1999) compare the experiences of Nigeria and Indonesia over several decades. In Nigeria, they document the fall in price indices of tradable goods and the collapse in production of export-crop agriculture (cocoa, oil palm, rubber) that accompanied the oil boom (1970-81). Food imports were meant to be regulated by quotas; although fairly ineffective at keeping out imports due to porous borders, quotas contributed to sharp increases in domestic food prices¹¹. The civil service expanded in Nigeria annually by 11.3 percent from 1973-83, compared with only 5.5 percent in Indonesia over the period 1975-83. Both governments doubled civil service wages in the mid 1970s, with some less-than-effective attempts made to extend minimum wages into the private sector in both countries.

BCG found no evidence of Dutch Disease in Indonesia. They highlight Indonesia's pro-agriculture policies, aimed at achieving rice self-sufficiency, which not only countered the effects of Dutch Disease but put in place a foundation for pro-poor GDP growth. Indonesia invested 20 percent of its budget in agriculture during the oil boom, compared with only 2 percent in Nigeria (BCG 1999, 411). Indonesia's agriculture also benefited from the availability of Green Revolution technology to improve rice yields, non-existent in Nigeria. In terms of skilled labor development, in the early 1970s, 1 in 4 teenagers attended high school in Indonesia, compared with only 1 in 20 in Nigeria. This led to higher skills premia and greater wage inequality in Nigeria.

In contrast to Indonesia's experience, Usui (1997) found that the Mexican economy suffered from Dutch Disease. While both countries devalued their currencies during the height of their booms, Mexico's weak macroeconomic management led to capital flight. The more successful Indonesian record was due in part to the ability of internationally trained economic technocrats to maintain a dominant position in Indonesian policy-making. In contrast, it took Mexico significantly longer to embrace neoclassical economic orthodoxy.

1.3. A SAMPLE OF DUTCH DISEASE EXPERIENCES

Oil-derived revenues accounted for an incredible 84 percent of total government revenue in Angola and nearly 50 percent of GDP in the late 1990s and early 2000s (Kyle 2010)¹². With nominal exchange rates fixed and inflation running at over 10 percent per year, Angola's currency, the real value of the kwanza appreciated steadily relative to the dollar between 1999 and 2008. Kyle noted that this made it difficult for domestic food producers to compete with imports. "Thus, unlike Nigeria, the problem is not one of a healthy agricultural sector which declines and collapses in the face of competition from abroad. Rather, Angola faces the even more difficult task of reactivating an agricultural sector that is already at a standstill in the face of adverse incentives." (2010, 18)

Pegg (2010) traces Botswana's experiences with a boom in diamond exports that began in the 1980s, and the literature's conflicting opinions about whether this has led to Dutch Disease or not. Pegg notes the reallocation of skilled labor from manufacturing into the extractives, being replaced in the source industries by less skilled, previously unemployed agricultural workers. However, given the small direct employment effect of the mines, the overall resource movement effect was "minimal." As for crowding out of non-extractives sectors, Pegg presents structural explanations (rather than Dutch Disease) for low growth rates of agriculture and manufacturing. He argues that agriculture in Botswana is constrained by severe arable land supply constraints and climate. Outside of cattle-raising, Botswana's agricultural policymakers have few investment alternatives. Botswana's manufacturing sector is hampered by its small market size, its proximity to the industrial powerhouse next door, South Africa, and its uncompetitive utility costs. Hailu et al. (2011) also point out that Botswana's currency, the Pula, was devalued regularly over more than 25 years to keep real currency appreciation to a minimum.

¹¹ Illegal food imports, however, were common by the mid 1980s. In the early 1980s, one of the co-authors worked in Northern Cameroon, where she personally observed informal, cross-border trade of Cameroonian rice into Northern Nigeria, in exchange for consumer goods. In the mid 1980s, Benin, which was dwarfed by its neighbor in terms of population, was one of the world's largest importers of milled rice. ¹⁰ Ebrahim-zadeh (2003).

¹² This compares with 59.3 percent of revenues and 40 percent of GDP in Kuwait and 58.2 percent of revenues and 19 percent of GDP in Venezuela.

More recently, the Government of Botswana and the De Beers Mining Company have promoted a “beneficiation” strategy to develop diamond value-added processing jobs in Botswana. Grynberg (2013) argues that De Beers, faced with a loss of stature as the pre-eminent global diamond cartel leader, shifted to a “Supplier of Choice” strategy that embraced support for raw material value-added processing – e.g., sorting, cutting, and polishing – in Botswana, rather than in Europe in order to maintain cooperative economic relations with a key raw material supplier. Some 3,000 new jobs were created by this downstream linkages project¹³.

Norway’s oil boom exemplifies successful management of Dutch Disease pressures (Larsen 2004). Labor reallocation into the extraction sector was modest. A centralized wage formation system, i.e., a national level tripartite wage-setting process that based wage increases on productivity increases, allowed policymakers to limit general wage pressures. Volumes of oil exports stabilized early and revenues generated were invested in an overseas Petroleum Fund to shield the economy from excessive pressures to spend and protect from currency appreciation.

TABLE 2: COMPARISON OF RESOURCE BOOMS & IMPACTS

	Norway	Mexico	Nigeria	Indonesia	Angola	Botswana
Boom in	Oil	Oil	Oil	Oil	Oil	Diamonds
Period of Boom	1980s to present	1980s	1973 to present	1970s-1980s	1970s to present	1980s
GDP Growth, 1975-2012 (ann. average)	2.9%	3.2%	3.5%	5.8%	5.8%	7.3%
IMPACTS ON						
Exchange Rate	Appreciation contained through establishment of overseas Petroleum Fund.	Appreciation controlled via devaluation.	Consistent appreciation ¹⁴ , yet resistance to devaluation to preserve rents	Appreciation controlled via devaluation.	Steady real ER appreciation vs. Dollar.	Pula rose > 20% relative to Rand, but depreciated significantly vs Dollar and Euro; 10 devaluations undertaken 1977-2005.
Spending	Public debt strictly controlled. Income from Fund used to support counter-cyclical investments.	Deficit spending expanded rapidly, biased toward current spending and investments in oil sector.	Civil service expansion.	Invested in pro-poor, rice self-sufficiency strategy.	Only 1.3% of operating & 5% of investment budgets spent on agriculture; significant general infrastructure spending.	Strong increase in public spending.
Labor Market	Controls on collective bargaining kept wage increases to minimum		Higher public sector employment, wages, drew labor out of food agriculture	More moderate increase in civil service (5.5%)		Rapid public sector wage increases, which led to increase in “queuing” as workforce entrants waited for civil service jobs. ¹⁵

¹³ Botswana’s diamond export business suffered tremendously from the 2008-09 global recession, so this figure certainly fell. Data on total employment associated with the capital-intensive diamond mining sector are difficult to identify. Grynberg compares Botswana’s diamond cutting and polishing employment record with India’s, where some 800,000 workers are employed in a diamond cutting and polishing industry based entirely on imported rough diamonds.

	Norway	Mexico	Nigeria	Indonesia	Angola	Botswana
Agriculture, Tradables	Countercyclical investments to maintain a diversified manufacturing & export base; investments in education, research, & development to build human capital outside of the extraction industry.	Pursuit of North American Free Trade Agreement, negotiation of which began in 1990, meant to open new markets for agricultural and manufactured exports from Mexico.	Export agriculture collapsed; import-substitution agriculture weakened by cheap imports.	Government invested to raise productivity; growth remained balanced across sectors.	Agriculture sector growth flat, though is primary occupation for > 2/3 population.	Strong Pula led to increased food imports from South Africa.

To summarize, natural resource booms have indeed led to currency appreciation, current and investment spending effects, and (more limited) resource reallocation effects (Table 2). In Nigeria export agriculture collapsed, while Angola’s agricultural sector has stagnated. In contrast, Indonesia’s proactive approach to investments to raise agricultural productivity helped the sector to resist the worst effects of currency appreciation, while Norway’s efforts to promote human capital development built skills and competitiveness outside of the petroleum sector. Labor movements into extractives and the public sector have been observed in Nigeria and Botswana, in part stimulated by increased public expenditures for a higher public sector wage bill. Skills shortages and limited direct employment effects of extractives industries were noted in Botswana. The cases of Angola and Botswana remind us that other structural explanations, besides Dutch Disease, help explain why economic growth outside of the extractive industry stagnates.

2. LABOR MARKETS IN MOZAMBIQUE: CONCEPTUAL MODEL

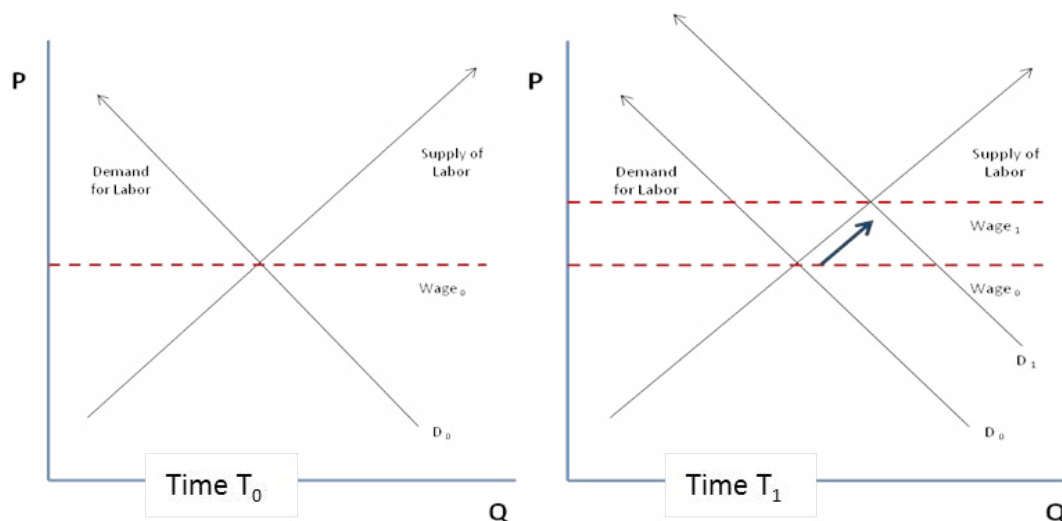
This section lays out a conceptual model for thinking about labor issues in Mozambique. To fully understand their multi-dimensional features requires an understanding of what has been termed “the labor sector,” a concept broader than just labor markets (Salinger and Wheeler 2010a). A multi-dimensional approach to understanding labor market issues allows for consideration of workers’ rights, labor laws and regulations, the formal government institutions meant to enforce those laws and regulations, civil society organizations that may represent or advocate on behalf of workers or employers, supply and demand forces in the market and the employment and wage levels to which they lead, and education and vocational training programs and their impacts on skills and employability of labor market participants.

The theory of Dutch Disease suggests that labor will “flow” out of sectors whose relative prices fall in the wake of currency appreciation into those sectors whose relative prices rise. In order to anticipate whether, and if so, to what extent, such reallocations will be observed in Mozambique, it is important to understand what drives employment, wages, and labor migration in Mozambique today and how “flexible” labor markets are in terms of movements of labor from rural to urban markets, south to north, outside of and into Mozambique, and across sectors of employment.

As classically defined, a labor market is influenced by shifts in demand and possible shifts in supply as workers react to new relative wages. A simple diagram of a labor market depicts traditional supply and demand curves (Figure 4). The point of their intersection marks the price of this factor of production, i.e., the prevailing market wage.

When the demand for labor increases – e.g., due to an expansion of the natural resource sector that requires additional workers in a wide range of skills sets, for example – the equilibrium wage will rise from Wage₀ to Wage₁, as shown below.

FIGURE 4: SIMPLISTIC PARTIAL-EQUILIBRIUM LABOR MARKET DIAGRAM, T₀ AND T₁



This very simplistic model requires overlays of increasing detail in order to configure it appropriately for labor market conditions in Mozambique in 2014 and expected conditions in 2024. It is important to nuance the analysis in a number of ways. First, these shifts will not be felt in the aggregate across the entire labor market. This requires disaggregation of the labor market into relevant components (skilled/unskilled, rural/urban, formal/informal, etc.). Second, the transition paths of adjustment by labor market segments to new relative incentives are likely not smooth but instead involve costs that affect outcomes. Third, labor market shifts do not take place in a vacuum, but are likely to be influenced by policies put in place by government to shape labor market outcomes. Each of these tempering factors is discussed in turn below.

Relevant layers of labor market disaggregation in a typical developing country include:

- Labor markets are segmented, marked by the co-existence of rural and urban labor markets, formal and informal labor markets, un- and under-employment, and domestic and regional labor markets.
- Employers' occupation and skill requirements, which differ by sector or industry, differentiate labor demand, leading to further segmentation of the labor market. Sharp wage differentials are usually observed for high-skill and medium-skill positions.
- Labor supply is differentiated by age/experience as well as different levels of education and training (which may or may not correspond to different levels of measurable skills)¹⁶.
- In situations of labor skills shortages, wage premia are typically bid up by employers, high-skilled workers may be “poached” by one employer from another, labor may migrate in response to the perceived wage premia, and/or labor may cross borders (or be brought in by employers) to fill the skills gaps.
- Labor market participation may also be differentiated by gender. For instance, men and women may be expected to fill or abstain from filling certain occupations, or they may respond differently to relative wage incentives to move from the farm to the city, from the south to the north, or across borders within a region, depending on household or cash labor responsibilities that may be shaped by culturally specific gender roles. Tradables sector occupations may be more or less focused on one gender or the other, with gender-biased implications if Dutch Disease takes hold (Frederiksen 2006). As child-bearers and child-raisers, lack of access to information and tools for controlling fertility and to appropriate child care for young offspring may further limit women's abilities to fully engage in labor markets outside the home.

¹⁶ It is possible to have earned a school leaver's certificate without having learned to read, for example.

- Labor contracts may involve a variety of institutional arrangements, affecting access to land, work, leisure, social networks, etc.
- A household may send members to participate in different labor markets, either simultaneously or staggered at different times throughout the year¹⁷. For example, members of rural households, whose primary occupation is farming, may sell to or exchange their labor with other farmers, work in slow periods to produce goods or services for sale in rural or urban markets, operate non-farm businesses in addition to their farming work, migrate to cities or outside one's home country for some or all of the year to work and remit a share of wages back home, and so on. Food security pressures to grow crops and livestock may result in seasonal variation in labor supply to non-farm work.
- Household members also make private education investment decisions, trading off earnings today for investment in education/training today and expected earnings tomorrow. On the other hand, lack of information about income-earning opportunities with increased education may lead household members to inefficient decisions about time spent in school or training programs¹⁸.
- Spatial distribution of resources, such as arable land, rainfall or access to water for irrigation, mineral resources, and urban concentrations also affect the geographic distribution of employment opportunities.
- Another aspect of labor force structure is linked to the structural composition of an economy. One of the most basic tenets of economic development is the notion that as countries grow, their economies “transform structurally,” i.e., become more diversified. In a very poor, traditional country a large part of national income (gross domestic product, or GDP) and its workforce will typically be concentrated in the primary sector, i.e., agriculture, fishing, and forestry. With economic growth, industry and services sectors tend to become relatively more important contributors to GDP as well as employment, and the share of agriculture retreats¹⁹.
- Pursuing data to quantify the contours of these observations in Mozambique helps us to break down aggregate labor demand and labor supply curves into more relevant, disaggregated curves. This is important because the responsiveness of supply or demand to wage changes, that is, price elasticities of demand and supply, are likely different for different segments of the labor market.

As depicted in the left-hand side of Figure 5, the supply of low-skilled labor may be nearly infinite in supply; in this segment of the labor market, an increase in demand does not change the prevailing wage. On the right-hand side, we see the nearly vertical supply curve for skilled labor, near fixed in supply, at least in the short term; in this segment, the same shift out in demand leads to significant upward pressure in wages. Alternatively, if skilled labor supply can be augmented through the “import” of skilled workers from abroad, the wage premium for skills may not rise as sharply, as seen in the right-hand side of Figure 6.

Substitutability of labor between segments may also be extremely limited. For example, employers may require literacy as a minimum qualification for consideration. More likely, they seek job applicants with specific skills for particular occupations. Tourism sector workers may be required to speak more than one language fluently. Construction workers may be required to possess skills in specific vocational trades, or may be required to have mathematics or safety/security knowledge. Miners may be required to be certified for safe operation or maintenance of specific machinery. More broadly, employers often seek “soft skills,” defined variously by different sources, but generally including some combination of reliability on the job, communications and listening skills, critical thinking and problem solving abilities, and ability to work in teams. Demonstration of these soft skills is expected at all occupational levels, even for the most basic, low-skilled positions (e.g., “construction helpers,” guards, gardeners, household help).

¹⁸ An experiment on the impact of information on wage earnings of graduates conducted in the Dominican Republic found that middle school-aged males significantly underestimate the returns to secondary education, while providing them with information about average wages for men with different levels of education (primary school, secondary school, university) led to a small but significant increase in their school attendance over the next four years in most, but not the poorest households. See Jensen (2010), summarized by the Abdul Latif Jameel Poverty Action Lab at Massachusetts Institute of Technology; see <http://www.povertyactionlab.org/evaluation/impact-information-returns-education-demand-schooling-dominican-republic>.

¹⁹ The classic reference here is Kuznets (1971).

FIGURE 5: SEGMENTED PARTIAL-EQUILIBRIUM LABOR MARKET DIAGRAMS

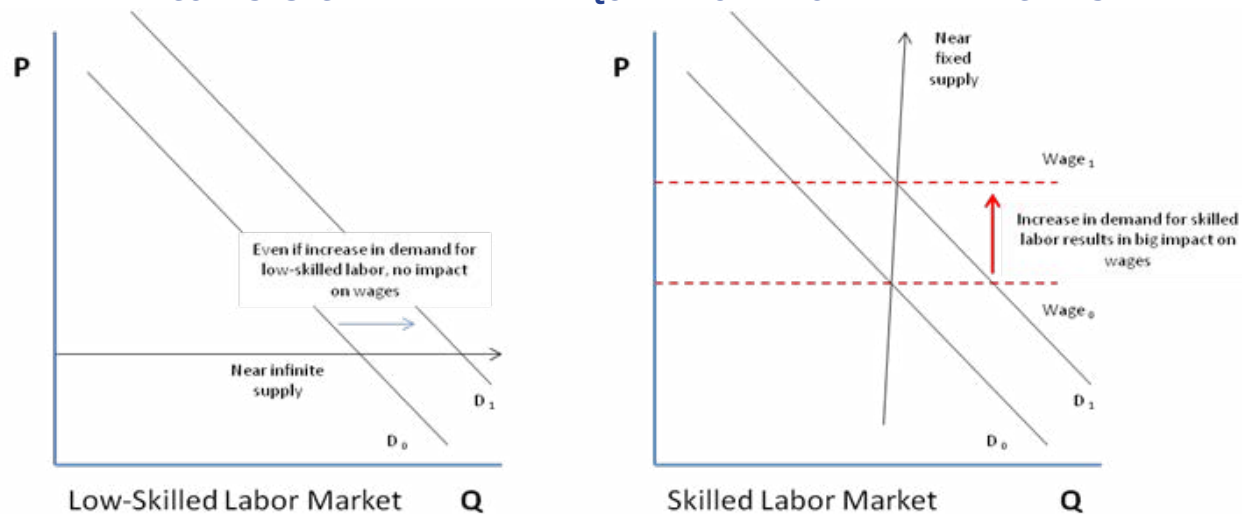
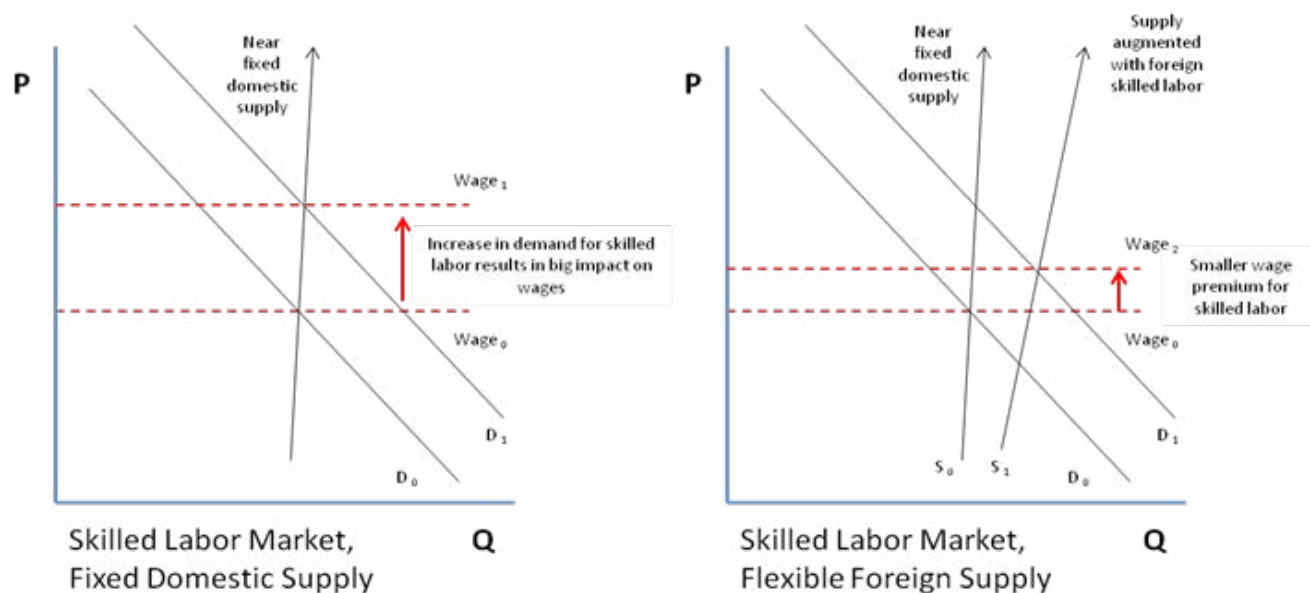


FIGURE 6: SKILLED LABOR DIAGRAM UNDER FIXED OR FLEXIBLE FOREIGN SUPPLY CONDITIONS



In addition to nuancing one's analysis of labor market demand and supply forces per above, it is important to consider what it takes for supply and demand to "meet," i.e., the information flows required for efficient labor market matching. The global literature is replete with diagnoses of "skills mismatches," in developed and developing countries alike²⁰. Employers everywhere speak of jobs that remain unfilled because the right candidates cannot be identified.

This is a classic labor market information gap. Part of the answer to solve the gap may be closer coordination between companies and government, so that their expected employment needs can be foreseen and training programs undertaken with sufficient lead time. Another part of the answer may involve providing detailed information to young people and their families as they decide how long to stay in school versus leave early to help support the family and what skills or career pathway to pursue²¹. More could also be done to advertise available positions (requirements, work conditions, pay scales, etc.) on electronic job boards, in newspapers, on the radio, via cell alerts, etc.

²⁰ Examples include World Bank (2012a) and Dobbs et al. (2012).

²¹ In a study undertaken in the Dominican Republic (DR) under the auspices of the Abdul Latif Jameel Poverty Action Lab at Massachusetts Institute of Technology, against a backdrop of high drop-out rates from secondary schools, Jensen (2010) found that eighth grade boys (the last year of compulsory schooling in the DR) have extremely limited information about the returns to secondary schooling. Students from a randomized subset of middle schools, who were provided with data on potential earnings, completed on average 0.2 more years of schooling over the next four years. The effect of information was more pronounced for least poor students, whereas among the poorest, the increased information had no discernible effect on schooling. Jensen writes, "The effects of the treatment [i.e., the dissemination of earnings information] on schooling are large and striking; there are few examples of policies or interventions that result in a 0.20- to 0.35-year increase in schooling, much less interventions that are as potentially inexpensive as this one." (Jensen 2010, 544) The research is interesting here because it suggests that provision of information may encourage youths and their families to place a higher value on education, despite the deferred present earnings that this entails.

Labor market adjustment costs are also important to consider. Being able to respond to increased wages in a distant province may require costs that create barriers to entry into new labor market opportunities. Displacement costs – transportation costs, opportunity costs, temporary lodging costs, search costs to find new employment, housing, schools, lack of local social networks to help mitigate some of these costs, etc. – may be sufficiently high to preclude optimal labor market adjustment. From employers’ perspectives, costs associated with displaced workers – providing housing, canteens, and other services to workers from afar – may also be costly.

Responses may also be conditioned by institutional factors. Markets for labor, like markets for other factors, goods, and services, are also influenced by laws and government policies. Governments may choose, through labor laws, industrial zone rules, or other legal and administrative measures, to regulate wages, employment numbers, conditions of hiring and firing, employee association and workplace representation, working conditions, workplace disputes, employment-associated benefits, and other work-related factors. These may have an impact on labor costs and returns to labor, and thus on supply and demand curves. Governments may also offer incentives to encourage labor market outcomes, such as training programs, training cost subsidies, housing and other urban infrastructure development programs, etc. It is important to understand what the labor sector’s legal framework includes, which elements of that framework are effectively enforced and which are not (and why not), and which elements of that framework may be problematic in terms of workplace conflicts.

Government policies are issued by the legislature, and are enforced by the executive branch, or administration. This may include ministries of labor, public employment offices, labor inspectorates, specialized judiciary bodies, arbitration councils or other dispute resolution agencies to resolve workplace disputes, and tripartite boards that oversee labor relations. Non-governmental organizations may also play roles in the labor sector, either in support of workers’ rights or specific worker groups (such as women) or in advocacy of certain dimensions of workplace support (such as daycare facilities).

Labor market responses may also be conditioned by institutional actors. Labor markets behave one way when the actors in question are individuals who seek to maximize their utility by hiring or presenting themselves for hire according to personal, firm-level, or household preferences. However, in some industries in some countries workers may be organized in groups, i.e., trade unions, to ensure that collective interests are defended. Negotiation of collective bargaining agreements among so-called “tripartite” actors – i.e., government, employers, and workers – may introduce a different dynamic into labor market relations.

3. LABOR MARKETS IN MOZAMBIQUE: QUANTITATIVE OVERVIEW

This section provides insights into Mozambique’s labor markets that are derived from secondary data sources and labor assessment interviews. Household, enterprise, labor, and agriculture surveys in Mozambique provide a variety of sources of data²². The labor assessment team relied on key secondary analysis and reports from local and international researchers and agencies²³.

3.1. DEMOGRAPHICS, EMPLOYMENT, & LABOR MOBILITY

According to national statistics, Mozambique in 2012 was a country of 23.7 million people, of whom half between the ages of 15 and 59 (Figure 7). Children ages 0-14 years comprise 45 percent of the entire population, 15-24 year-old’s (youth) are 20 percent, and those over 60 years are almost 5 percent of the total population. This leaves 7.3 million, or 30.6 percent of the total population, in the adult workforce, ages 25 to 59 years. Of these, just over 1 million were registered with the national social security system in 2012, i.e., are formally employed, of which just under 350,000 were considered “active.” At 2.5 percent per year, average 2010-2012, the population is still growing quite rapidly, although that rate has fallen from highs of over 3 percent in the early to mid 1990s in the wake of the civil war.

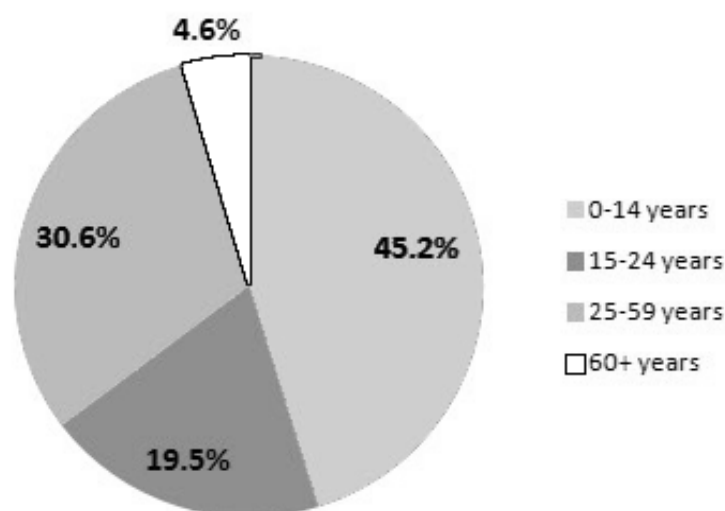
²² The most relevant are the Inquéritos Agregados Familiares (IAF), 1996/7, 2002/3; Inquérito ao Sector Informal (INFOR), 2004; Inquérito Integrado à Força de Trabalho (IFTRAB), 2004/5; Inquérito aos Oracamentos Familiares (IOF), 2008/9; Inquérito as Indústrias Manufactureiras (IIM), 2012; Inquérito Contínuo aos Agregados Familiares (INCAF), 2012 (only 2 quarters completed); and Trabalho de Inquérito Agrícola (TIA), conducted in 1996, 2002, 2003, 2005, 2006, 2007, and 2008, then revised as the Inquérito Agrícola Integrado (IAI), 2012.

²³ Our literature search identified Ibraimo (2014); Ali (2013); Ennis (2013); Fox and Sohnesen (2013); Jones and Tarp (2012); Schindler and Giesbert (2010); Cramer, Oya, and Sender (2008a); Warren-Rodriguez (2008); De Vletter (2007); Francisco and Paolo (2006); Massingarella, Nhate, and Oya (2005), as well as MPD/DNEAP (2010) and reports on the INFOR (2006), IIM (2013), and INCAF (2013).

An estimated 300,000 new labor market participants enter the work force each year (AFDB and OECD 2012). According to the Ministry of Labor (2012), just over 280,000 jobs were created in 2012, including jobs in the public sector, the private sector, self employment, hiring of foreigners, and mining jobs in South Africa²⁴. These figures, if comparable, suggest that job creation in Mozambique is not keeping up with growth of the working age population.

Nearly 70 percent of the labor force is employed²⁵, as disaggregated in Table 3. Rates of employment are substantially higher in rural, compared with urban, areas. Broken down by education level, they are lowest for those who have “only” completed secondary school education, a rather odd statistic, since that represents a substantial education investment in Mozambique²⁶.

FIGURE 7: MOZAMBIQUE, 2012 DEMOGRAPHIC BREAKDOWN BY AGE



Source: INE

TABLE 3: RATES OF EMPLOYMENT IN MOZAMBIQUE BY GENDER

(%)	Men	Women	Total
Total	67.4	70.3	69.0
BY RESIDENCE			
Urban	48.5	43.5	45.9
Rural	78.0	83.3	81.0
BY EDUCATION			
None	75.9	80.1	78.9
Primary, to 5 th grade	77.2	78.5	77.9
Primary, 6 th - 7 th	61.2	54.2	58.3
Secondary	50.1	34.4	43.6
Higher	60.8	58.0	59.9
Don't know	65.6	77.6	70.1

Source: INE (2013b)

²⁴ It is not clear how reliable these data are, and to some extent they raise more questions than they answer, especially for self employment. Data presented in the Ministry of Labor's (MITRAB) labor statistics bulletin are not internally consistent and provide no background on collection methodology, but represent the best official data available. This highlights the need for a strong labor market data collection system to underpin policy.

²⁵ Mozambique's INE uses the term “employed” to mean the sum of a) those who are salaried workers, b) those who work in the home but are not remunerated, and c) those who work for themselves.

²⁶ This is an odd finding, for surely a secondary school graduate in Mozambique has marketable skills. It could imply some sort of “employment expectations trap,” whereby completion of secondary school increases the graduate's expectation that she or he should be able to land a formal job, yet the level of education actually does not provide enough training to qualify for formal sector employment, which likely requires some post-secondary education. Still, that being said, secondary school graduates may feel overqualified for, and thus reject, employment in agriculture.

And, as typically found throughout the world, the rates are also lower for youth (ages 15-24), compared with those of adults, ages 25 to 64. Perhaps the most striking feature of the Mozambican labor force is the high share of workers – 80 percent – who consider agriculture to be their primary occupation (Table 4 and Table 5)²⁷. Along with the GDP sectoral breakdown figures in Table 1, this figure further confirms the fact that dynamic transformation of Mozambique’s economy has yet to have taken place. This is an extraordinarily high share of the economy that has not yet transitioned out of the primary production sector into industry or services sectors²⁸.

TABLE 4: ALLOCATION OF WORKERS, BY SECTOR (%)

	96/97	02/03	04/05	08/09	Change, 96/7-08/9
Agriculture	85.2	79.9	80.7	80.6	-4.6
Commerce	4.0	7.3	7.8	7.9	4.0
Other services	2.7	2.8	2.9	2.9	0.2
Manufacturing	2.7	3.6	2.8	2.7	0.0
Construction	1.4	1.6	1.4	1.7	0.3
Education	0.8	1.6	1.6	1.7	0.9
Government	1.2	1.2	1.2	1.1	-0.2
Transport	1.1	1.1	0.8	0.8	-0.2
Health	0.5	0.5	0.5	0.4	-0.1
Mining	0.5	0.5	0.2	0.2	-0.3

Source: Jones and Tarp (2012), p. 26

TABLE 5: DISTRIBUTION OF EMPLOYMENT, BY PRINCIPAL OCCUPATION (%)

	Total			Urban			Rural		
	Total	M	W	Total	M	W	Total	M	W
Manager	0.3	0.6	0.1	0.9	1.4	0.3	0.1	0.3	0.0
Technical (University)	1.7	2.4	1.1	5.1	6.0	4.2	0.7	1.2	0.4
Technical (Non-University)	1.2	1.6	0.8	4.3	5.2	3.4	0.3	0.4	0.1
Administration	0.5	0.8	0.3	1.8	2.4	1.1	0.1	0.2	0.0
Non-Agricultural Worker	4.3	9.0	0.5	13.5	24.5	2.3	1.6	3.7	0.0
Independent Artisan	0.1	0.3	0.0	0.2	0.2	0.2	0.1	0.3	0.0
Small Enterprise Worker	5.9	6.5	5.4	18.8	14.5	23.2	2.1	3.7	0.8
Service Worker	2.3	4.2	0.7	8.1	13.0	3.0	0.5	1.2	0.1
Domestic Employee	0.9	0.4	1.3	3.6	1.2	6.0	0.1	0.1	0.1
Peasants	77.3	65.4	87.0	36.2 ²⁹	20.9	51.8	89.4	80.8	95.9
Agricultural Workers	4.2	6.5	2.3	3.1	4.4	1.8	4.5	7.3	2.4
Other	1.4	2.3	0.6	4.3	6.1	2.5	0.5	1.0	0.2

Note: M = men, W = women

Source: INE (2013b)

²⁷ The agriculture sector in Mozambique includes both subsistence farming (e.g., maize, rice, other grains, groundnuts and beans, cassava, sweet potato, other vegetables, livestock), traditional export crop cultivation, either on organized plantations or as outgrowers (e.g., tobacco, sugar, cotton, bananas and other fruits, cashews), and non-traditional cash crops (e.g., agro-forestry, biofuels, soybeans, poultry). See MPD/ DNEAP (2010), USAID (2011), and Monitor Group (2012). Biofuels production refers to sugarcane, sweet sorghum, and jatropha; see Arndt et al. (2008).

²⁸ For countries reporting data to the World Bank for the last five years, Mozambique’s figure easily eclipses the 65% of top-ranked Uganda.

²⁹ Rather high for what one might expect in “urban” areas. The definition must be rather broad, including what one would normally consider to be “peri” urban areas.

The importance of agriculture, even in urban areas and especially for women, is noteworthy. Wage labor is particularly important for urban men (24.5 percent), whereas urban women (aside from agriculture) tend to operate or work in small enterprises (23.2 percent). The INCAF (Inquérito Contínuo aos Agregados Familiares – Continuous Household Survey) survey also presents data for workers 15 years and older regarding sources of income. Nationally, 13 percent of Mozambicans receive a salary, 62 percent work for themselves and are compensated, and 25 percent work at home without remuneration (Table 6). The higher the level of education received, the more likely an employed worker is to be salaried as opposed to self-employed or working for the family.

TABLE 6: EMPLOYMENT BREAKDOWNS BY INCOME SOURCE

(%)	Salaried	Self-Employed	Family Labor without Pay
Total	13.1	61.9	25.0
BY GENDER			
Men	22.0	58.1	19.9
Women	5.9	65.0	29.1
BY RESIDENCE			
Urban	41.0	50.7	8.3
Rural	4.9	65.2	29.9
BY EDUCATION			
None	3.5	67.4	29.0
Primary, to 5 th grade	7.0	66.5	26.6
Primary, 6 th - 7 th	18.0	58.3	23.7
Secondary	49.6	38.2	12.3
Higher	92.8	6.8	0.4
Don't know	26.6	63.8	9.7

Source: INE (2013b)

Rural survey findings should be interpreted with caution (Cramer, Oya, and Sender 2008). Ali (2013) notes that the straightforward answering of the question about primary household occupations with “agriculture” fails to capture the rich diversity of off-farm activities in which household members also engage.

Rural household members are frequently actively engaged in a multiplicity of activities to earn incomes. Rural labor market wages in the informal economy are paid in a variety of forms, typically not on a regular, monthly basis, more commonly by task completed, or on a daily basis, whereas agricultural workers employed on foreign- or state-owned farms are more commonly paid monthly wages (Cramer, Oya, and Sender 2008), but may also be recruited for task or seasonal labor (O’Laughlin and Ibraima 2013). IFTRAB 2004/5 suggested that, nationally, 62 percent of rural population work for themselves, 25 percent work in the family without remuneration, and 13 percent have paid employment. Regionally, a higher share of the rural economically active population is salaried in the South (27 percent) than in the Center (10 percent) or North (8 percent).

National agricultural surveys (TIA) provide some insight into the use of wage labor in rural areas. TIA02 revealed that about 40 percent of employers from large households hire in temporary labor. Small and medium enterprises also hire in temporary and permanent labor. The most recent integrated agricultural survey (IAI2012) asked about wage labor with a twelve-month recall, asking households to detail the type of work, employer, products or services sold, and incomes gained from off-farm employment, as well as amounts received from remittances sent by household members. This fact is highlighted in Table 7, which confirms a strong uptick in the percentage of households that indicate having more than one distinct source of income between 1996/97 and 2008/09. Sender, Oya, and Cramer (2006) present a series of life stories to dispel the impression that women in Mozambique do not participate in rural labor markets. For many women, access to paid labor (“ganho-ganho” labor) is indeed a crucial supplement to livelihoods they earn on-farm.

TABLE 7: HOUSEHOLDS, BY NUMBERS OF DISTINCT SOURCES OF INCOME (%)

		96/97	02/03	08/09	Change in Points, 96/7-08/9
Rural	None	49	15	20	-29
	One	32	51	36	4
	More than one	19	34	43	24
Urban	None	30	13	14	-16
	One	53	58	42	-11
	More than one	17	30	44	27

Source: Jones and Tarp (2012), p. 34

Assuring that men and women can move, whether from district to district within a province, across provinces, or even across borders, if need be, is an important safety net dimension for Mozambicans (Massingarella, Nhate, and Oya 2005). However, the ability to engage in multiple livelihood streams may actually be wealth-dependent, favoring those with greater assets. Data from TIA05 highlight the disparity between the wealthiest 20 percent of households, which relied on non-farm income for 50 percent of their total income, in contrast with the bottom four income quintiles, which relied on farm income for two-thirds to four-fifths of their total income (Table 8).

Labor migration out of Mozambique has long been an important dimension of total income-earning, especially for households in the South (De Vletter 2007). Migration to South Africa, especially to work in the mining sector in particular, has historically compensated rural southern Mozambican households’ much weaker agricultural endowments, compared with the center and north. Mather (2000) reported that horticulture cultivation in neighboring South Africa, especially in the Mpumalanga province just west of Maputo, also hires Mozambican farm labor during peak seasons, though such work is far less well paid. Remittance inflows, according to De Vletter, have led to much higher average incomes and wealth in the south. Investments in housing, pick-up trucks, irrigation pumps, and (increasingly) informal trade activities for household members who remain in Mozambique are common investments made from remittance incomes. Mozambique also receives migrant workers from neighboring South Africa, Zimbabwe, and Malawi.

TABLE 8: SHARES OF RURAL HOUSEHOLD INCOME, BY INCOME QUINTILE, 2005

Quintile	Farm Income				Off-Farm Income						
	Crop Production	Livestock Sales	Unskilled Farm Labor	Subtotal	Unskilled Non-Far Labor	Skilled Non-Farm Labor	SME-Extraction	SME-Other Low	SME-Other High	Remittance/ Pension	Subtotal
1-Bottom	71.8	3.3	5.6	80.7	0.7	0.9	3.3	4.9	2.7	5.5	18.0
2	70.3	2.6	4.5	77.4	2.0	1.3	5.1	5.6	3.4	5.2	22.6
3-Middle	65.8	2.9	3.4	72.1	3.4	3.2	5.6	6.3	5.0	4.5	28.0
4	61.2	2.1	3.5	66.8	3.7	7.1	4.7	5.5	7.9	4.5	33.4
5-High	46.4	1.3	1.7	49.4	3.0	16.5	5.3	5.4	15.6	5.0	50.8
National	63.1	2.4	3.7	69.2	2.5	5.8	4.8	5.5	6.9	4.9	30.4

Source: Mather et al. (2008)

The internal mobility of rural labor is also reaffirmed in the case study provided by O’Laughlin and Ibraimo (2013), describing the importance for men and women of seasonal, contract labor in the sugar sector in Manhica district, about 80 km north of Maputo. The Manhica district has historically been an important source of migrant labor to South African. As political and economic forces in South Africa combine to make steady employment for Mozambican workers there less likely, expansion of sugar plantation employment (both permanent and seasonal) in the Manhica district has helped to compensate for reduced employment opportunities across the border.

3.2. INVESTMENT AND EMPLOYMENT

The Center for Investment Promotion (CPI) tracks the number of investment projects approved, by sector, the expected values of those investments, and the number of employment positions expected to be generated per project (Table 9). Across all years and all sectors, the largest share of projects (27.2 percent) and investment value (19 percent) is in the industry sector, with services a close second (25.5 percent). However, agriculture/agro-industry tops the list with 30.8 percent of expected jobs. Energy projects are expected to be the least labor-intensive, per total investment value, as seen in the right-hand column.

TABLE 9: EMPLOYMENT CREATION BY INVESTMENT PROJECTS, 2010-2013

	Number of Projects	Employment (Expected Jobs)	Average Employment per Project	Total Investment (MT)	Investment per Job (MT/position)
Agriculture/Agro-industry	183	37,263	204	2,290,050,149	61,456
Aquaculture/Fishing	12	1,003	84	18,614,126	18,558
Banking/Insurance	8	1,012	127	273,807,169	270,560
Construction/Public Works	134	16,287	122	1,052,539,063	64,624
Energy	4	304	76	2,311,332,287	7,603,067
Industry	370	22,750	61	2,543,678,756	111,810
Services	347	24,794	71	1,578,309,164	63,657
Transport/Communication	118	9,175	78	2,387,681,718	260,238
Tourism/Hotels	183	8,493	46	922,946,601	108,671
TOTAL	1,359	121,081		13,378,959,033	110,496

Note: The extractives industry is likely contained within the “Industry” category.

Source: Center for Investment Promotion

The CPI also follows up with investors to record actual, realized investments and jobs created. For 2010 through 2012, the results in terms of both investment values and jobs created fall well short of original expectations (Table 10).

TABLE 10: INVESTMENT VALUES REALIZED AS SHARE OF PLANNED (%)

	2010	2011	2012
Agriculture/Agro-industry	8.6	3.3	7.1
Aquaculture/Fishing	0.0	14.9	100.0
Banking/Insurance	71.7	14.4	33.1
Construction/Public Works	39.1	5.7	81.3
Energy	0.0	14.4	5.0
Industry	28.7	13.9	24.6
Services	51.7	13.4	17.7
Transport/Communication	5.6	50.5	3.8
Tourism/Hotels	19.0	13.8	9.8
TOTAL Investment Value	11.3	15.9	14.0
TOTAL Jobs	16.6	11.6	25.5

Note: The full year's record of realized for 2013 is not yet complete.

Source: Center for Investment Promotion

3.3. LABOR INSTITUTIONS

Mozambique's labor sector is overseen by the Ministry of Labor (MITRAB). Among its various roles, MITRAB enforces national labor law, coordinates with the National Social Security system for information about formal sector employment, participates in national minimum wage negotiations (see below), manages the system of foreign worker quotas, and oversees professional training and education through the National Institute for Employment and Professional Training (INEFP).

Two labor union confederations presently exist in Mozambique to advocate on behalf of organized workers in formal, private sector employment, the Workers' Organization of Mozambique (OTM) and the National Confederation of Independent and Free Trade Unions of Mozambique (CONSILMO)³¹. These cover approximately 23 trade unions (Ulandsekretariat 2012) and over 400,000 workers. This represents about 5 percent of the total adult workforce. They also support workers³² in the informal sector, through the Informal Sector Workers' Association of Mozambique, in their negotiations with municipalities.

Relations between the companies interviewed and the unions seem to be relatively good. Employers state that unions have played a constructive role in situations of workplace conflict, and also in terms of explaining to workers certain company policies.

³¹ As of now Mozambican public sector workers have no rights to collective bargaining or strikes. AIM reported on May 1, 2014 that a bill to establish these rights for public employees passed its first reading in Parliament in early May, and is expected to become law later in the year.

³² Figures were provided by CONSILMO, whose unions include about 126,000 members across construction, mining, and wood working industries; road transport and garagists; and private security workers. OTM is said to have about 300,000 members. Public sector workers, health care workers, teachers, journalists, mail service workers, retirees, peasants, and informal sector workers may be organized, but are not covered in the two confederations. For further information, see Ulandsekretariat (2012).

3.4. MINIMUM WAGES

Analysis of wage data, especially nuanced by region, sector, and occupation could provide pertinent insights into labor market status. As the effects of a natural resource boom become more deeply rooted in Mozambique, one would expect to see upward pressure on wages, as discussed early. Unfortunately, scant information is available from public sources on market wages paid in Mozambique. Private human resource companies conduct salary surveys in Mozambique, to which Mozambique's largest private employers subscribe³³.

Minimum wages are set annually by the Government, in consultation with the Consultative Labor Commission, a tripartite body that includes representatives from workers (labor unions), employers (CTA), and government. Minimum wages apply to the normal work period, which is defined in Mozambique's 2007 labor law (Article 85, 1) as 48 hours per week and 8 hours per day. Overtime, night work, shift work, part-time work, weekly rest, and other work leaves are also defined in the labor law.

Minimum wages set for 2008-2014, effective June 1 each year, are presented in Table 11. Minimum wages that become effective April 1, 2014 rose by a simple average of 11.6 percent from the previous year. By far the greatest nominal increase is in the agricultural sector, where the minimum wage was increased by over 20 percent in one year.

TABLE 11: MINIMUM WAGES IN MOZAMBIQUE (METICAL/MONTH)

Sector	2008	2009	2010	2011	2012	2013	2014	% Change, 2013-14
Fishing, Kapenta ³⁴	1810	1900	2090	2300	2485	2645	2857	8.0
Public Administration	1826	2083	2270	2380	2522	2699	3002	11.2
Agriculture, Forestry, Hunting, Livestock	1315	1486	1692	2005	2300	2500	3010	20.4
Sugar	1315	1500	1593	2075				
Fishing, General	1892	2050	2200	2475	2640	2850	3167	11.1
Industries, Baking			2497	2850	3021	3195	3485	9.1
Construction	1909	2115	2435	2775	3177	3495	3953	13.1
Extractives, Salt							4010	
Non-Financial Services	1926	2250	2550	2996	3510	3826	4228	10.5
Extractives, Quarry & Sand					3295	3888	4316	11.0
Industries, General	1975	2300	2497	3100	3585	3943	4400	11.6
Electricity & Water (Small companies)	2140	2403	2662	3222	3817	4107	4480	9.1
Electricity & Water (Large companies)			2662	3116			4768	
Extractives, General	1892	2120	2400	2890	3526	4651	5350	15.0
Financial Services (Micro-)							7421	
Financial Services (Banks, insurance)	1942	2745	3483	5320	6171	6817	7465	9.5

Source: Hanlon (2014), AIM (2014)

³⁴ Small, freshwater sardines that are fished on the Cahora Bassa reservoir in Tete province.

The starting point for annual minimum wage negotiations considers the rates of inflation and sectoral GDP growth (the latter is a proxy for productivity) as multipliers to the previous year's minimum wage. To this is added a “negotiation factor” that may add to or subtract from the value achieved through the wage increase formula. The formula is:

$$\% \text{ Increase in Minimum Wage} = ((1 + \text{Inflation Rate}) (1 + \frac{1}{2} * \text{Annual Sector GDP increase}) - 1) + / - \text{“Negotiation Factor”}$$

This formula ensured that real minimum wages do not decrease. For example, corrected for inflation, real minimum wages in 2013 were at least 5 percent – and in some sectors, 32-154 percent (the real financial services sector minimum wage in 2013 was 153.7 percent greater than in 2008) – greater than in 2008.

In 1996, Mozambique applied a single minimum wage throughout the economy. Hanlon (2014) reports that a separate minimum wage for agriculture was introduced in 2000. Today, minimum wages are defined for 15 sectors and subsectors. Minimum wages typically are references for compensation in unskilled and semi-skilled positions, although large, formal companies typically pay above the minimum wage even at those skill levels. They do not usually apply to employment in the informal sector. Within a sectoral category, the minimum wage applies to the entire sector and is not nuanced by occupation. So, for example, a guard or cleaner working for a bank should be paid the financial sector minimum wage, whereas a guard or cleaner working for a hotel should be paid the minimum wage applicable to the tourism sector.

Mozambique's minimum wages also provide a benchmark of costs of low-skilled labor to allow comparison across countries. International investors, especially in labor-intensive manufacturing industries, consider comparative wage and labor productivity data when deciding among alternative countries in which to invest. Expressed in dollars converted roughly at an exchange rate of 30 metical/dollar, Mozambique's minimum wage for a general industry worker, for example, is 147 dollars per month or 5.64 dollars per day. By way of comparison, the minimum wage in dollars of a garment factory sewing operator in Cambodia was raised in early 2014 to 95 dollars per month. Yet Cambodia's annual gross national income per capita in 2012 was 2330 dollars, more than twice that of Mozambique (1000 dollars). The new agricultural wage is equivalent to 100 dollars per month, or 3.86 dollars per day. As the metical appreciates under Dutch Disease, the dollar equivalents of Mozambique's minimum wages will rise even further.

As Jones and Tarp pointed out for 2012, the minimum wage in agriculture at that time was “three times higher than overall ... labour productivity in that sector” (2012, 29). It is not surprising that permanent, formal employment in the agricultural sector, on a sugar plantation for example, is considered to be desirable employment, given that informal sector wages for seasonal or task-based labor are paid below minimum wage³⁵. Thus, Mozambique's minimum wage policy may threaten competitiveness if labor productivity does not rise concurrently.

A comparison of Mozambique's economic structure and progress with those of Vietnam, a country that experienced a similar colonial past, civil war, low starting points of economic development, and high rates of poverty is made by Arndt et al. (2010). Vietnam's much higher educational base is reflected in higher wage premia paid to high-skilled workers in Mozambique than in Vietnam, reflecting the greater scarcity of high-skilled workers in Mozambique. Ratios of non-farm wages of high-skilled to low-skilled labor are 2.26 in Vietnam (2004) and 4.62 in Mozambique (2002) (Arndt et al. 2010, 17),

3.5. INFORMAL SECTOR & HOUSEHOLD ENTERPRISES

Labor market informality in Mozambique, as pointed out by Jones and Tarp (2012), is defined by INE to mean anyone who is not salaried, i.e., those who are self-employed or working unpaid in household jobs. Jones and Tarp further note that, even within the wage labor category, work arrangements may exist that are insecure, irregular, and informal. Thus, as presented in Table 6, over 85 percent of Mozambicans are considered to work in the informal sector. Men are nearly four times more likely to be salaried than women; informal employment occupies 78 percent of all men and 94 percent of all women. Moreover, in exploring the evolution of these shares over time, Jones and Tarp note that these proportions have remained steady, suggesting that the economy, while growing, is not generating a larger pool of formal sector employment opportunities.

³⁵ See, for example, the case of sugar workers described in O'Laughlin and Ibraimo (2013).

Fox and Sohnesen (2013) present primary employment data broken out to show the importance of household enterprises to incomes (Table 12). They are especially important in the urban sector, where 22.7 percent of households work. They observe that “many households still had only farm income in 2008, but increasingly rural and urban households are trying to increase total income through livelihood diversification into non-farm sectors, while maintaining farm income” (Fox and Sohnesen 2013, 8). Increasing the business environment for household enterprises, the authors argue, should be considered as part of the government’s poverty reduction planning.

TABLE 11: MINIMUM WAGES IN MOZAMBIQUE (METICAL/MONTH)

	Urban			Rural			National		
	1997	2003	2009	1997	2003	2009	1997	2003	2009
Agriculture	66.7	46.7	44.7	94.0	92.3	93.2	86.8	78.2	79.6
HH Enterprises	10.1	19.0	22.7	2.3	3.8	2.8	4.4	8.1	8.4
Non-farm Wage	23.2	34.3	32.7	3.7	3.9	3.9	8.9	12.6	12.0
Private sector	7.6	21.9	22.5	1.3	2.2	2.1	3.0	7.8	7.8
Public sector	15.6	12.5	10.2	2.4	1.7	1.8	5.9	4.7	4.2

Source: Fox and Sohnesen (2013, 6)

The Ministry of Industry and Trade’s Division of Private Sector Support helps to formalize small and medium-sized enterprises by issuing “simplified licenses.” They also collect information about levels of employment associated with these enterprise licenses (Table 13).

TABLE 13: ISSUANCE OF SIMPLIFIED LICENSES TO SMALL AND MEDIUM ENTERPRISES

Province	Simplified Licenses Issued					Associated Employment per License				
	2010	2011	2012	2013	TOT	2010	2011	2012	2013	AVG
NORTH										
C Delgado	290	378	463	494	1625	2.48	4.90	4.85	5.34	4.59
Nampula	573	855	885	1214	3527	1.38	3.37	1.13	1.81	1.95
Niassa	214	156	142	240	752	10.64	2.13	7.62	1.65	5.44
CENTER										
Manica	483	370	264	405	1522	0.98	2.22	9.64	5.37	3.95
Sofala	577	540	2184	2585	5886	1.25	2.31	0.42	0.28	0.61
Tete	269	355	1044	981	2649	6.02	7.25	4.65	2.60	4.38
Zambezia	1438	1212	541	1214	4405	0.91	0.37	0.79	0.50	0.64
SOUTH										
Inhambane	242	286	359	458	1345	2.91	5.10	6.94	3.56	4.67
Gaza	84	122	292	813	1311	1.67	4.91	1.54	1.31	1.72
M City	1470	1472	3271	4697	10,910	3.41	4.02	2.24	1.73	2.42
Maputo	2654	2924	1980	2545	10,103	0.43	2.08	4.57	2.05	2.13
TOTAL	8,294	8,670	11,425	15,646	44,035	1.80	2.79	2.83	1.75	2.25

Source: Ministry of Industry and Trade, Division of Private Sector Support, received March 2014

Whether these represent “new” enterprises or formalization of already-existing enterprises is impossible to discern. Maputo City and Province are clearly the most dynamic, in terms of numbers of licenses issued. Interestingly, Tete Province, the center of Mozambique’s coal mining industry, does not show unusual levels of activity, even when normalized around populations by province (not shown here). This suggests that levels of secondary economic activity around the mining sector may not be growing as rapidly as one might have predicted (or are unlicensed). Enterprises in the north are somewhat larger, in terms of jobs associated per enterprise, than those in the center or south (averages are 3.12, 1.66, and 2.38, respectively).

Box 1: Stylized facts about mozambique’s labor market

1. Mozambique’s population is young, rural, and growing rapidly.
2. Rates of labor force participation are high, unemployment is low and principally confined to urban youths.
3. Under employment is rife.
4. The informal sector is large and is the principal locus of new job creation.
5. Levels of education (skills) remain low throughout the economy.
6. Structural change in the labor market has been limited.
7. There are large spatial differences in the distribution of Mozambican labor.
8. Productivity gaps between sectors are large and widening, largely due to slow productivity growth in agriculture.
9. Household income sources have diversified over time.
10. Social discontent appears to be rising, particularly among the urban youth.

Source: Jones and Tarp (2012)

3.6. SUMMARY: LABOR MARKET STYLIZED FACTS

A summary of “stylized facts” about Mozambique’s labor market is distilled from Jones and Tarp (2012) in Box 1 below. These paint a picture of a highly segmented labor market: a small portion of the workforce is educated, skilled, and either formally, informally, or self-employed, while the vast majority of Mozambicans is locked into lower productivity, informal or self-employment, on and off farm, often under employed, and struggling to patch together enough different livelihoods to make ends meet for their families.

4. LABOR MARKETS IN MOZAMBIQUE: ASSESSMENT FINDINGS

The March 2014 field assessment probed a number of dimensions that characterize Mozambique’s labor markets, explored below.

4.1. ROLE OF LABOR IN OVERALL DEVELOPMENT STRATEGY

Job creation is a cross-sectoral issue that affects a number of different government portfolios. Developing a strategy to promote job creation should involve not just for the Ministry of Labor, but also the ministries of Education, Industry and Commerce, Planning and Development, Agriculture, etc. However, to date in Mozambique this issue has been treated in a fairly fragmented way.

The government, NGOs, international organizations, and companies themselves are actively engaged in trying to address the skills gaps and labor mobility. However, a 2013 ILO (International Labour Organization) seminar in Maputo concluded that while there are “a considerable number of programs and initiatives related to job creation, skills development, and labor market institutions.... Interventions are fragmented and the scale of some of the interventions is far too small to have an impact” (ILO 2013).

Box 2: Indonesia’s successful diversification strategy

The share of oil and gas in Indonesia’s public revenue fell from a high of 49 percent in 1982 to 23 percent in 2005. This was a direct result of a strategy with two vital characteristics: i) sector policies that supported the agricultural and manufacturing sectors (mainly textiles and footwear); and ii) policy flexibility, as demonstrated through the country’s careful transition from import substitution to export-led growth. The policy of attracting foreign investment has been largely successful at targeting the labor-intensive manufacturing sector. The policy took advantage of both the relatively lower labor costs and access to the US market following the preferential trade concessions provided under the Generalized System of Preferences (GSP) scheme (Rosser 2007). At an average annual growth rate of about 12 percent, manufacturing grew at the highest rate between 1965 and 1997. The success of Indonesia’s industrialization strategy is based on building vital sectoral linkages, investing in human and physical capital, and providing targeted subsidies and tax breaks (Usiu 1997).

Revenues from the natural resource sector were invested in agriculture, mainly in irrigation and land reclamation. It also provided subsidies for inputs, such as fertilizer, pesticide, seeds as well as irrigation. Between 1970 and 1984, the total irrigated land area in Indonesia increased from 3.7 million to 4.9 million hectares, the use of subsidized fertilizers increased from 0.2 million to 4.1 million tons, and the use of subsidized pesticides increased from 1,080 tons to 14,210 tons (Barbier 1989). As noted by Panayotou (1993, 64), “[T]he Indonesian government subsidized pesticides at 82 percent of the retail price.” After achieving self-sufficiency in rice (import substitution), the strategy moved towards export crops (outward orientation and export-led growth). Indonesia has recently become the largest producer and second-largest exporter of palm oil, and ranks as the fourth-largest coffee producer and exporter in the world (Fuglie et al. 2010).

Source: Hailu et al. (2011, 25)

Given that the majority of Mozambicans work in low-productivity agricultural jobs, alongside severe skills shortages, the situation is clearly serious. Existing initiatives are not, though, necessarily sufficient to address the scale of the problem or address them in time to ensure maximum benefit of the upcoming extractive industry boom to Mozambique and Mozambicans. And there does not seem to be as yet any detailed discussion of the need to invest in proactive support to non-extractive sectors of the economy in order to avoid complete dominance of the extractives, as did Indonesia, described in Box 2. Without such a strategy, while GDP might continue to grow, employment may not. The impact of the extractive sector on poverty reduction and sustainable inclusive growth for all Mozambicans would thus be limited.

This has been recognized by government, with an increasing rhetoric around the need for not only growth, but inclusive growth. Job promotion is one of three main objectives defined in the government’s Action Plan for the Reduction of Poverty (PARP). The PARP defined three main job creation thrusts:

1. Align professional training with the needs of emerging industries in strategic sectors (defined as tourism, industrial maintenance, agriculture, processing, mining, management and administration);
2. Recognize learning acquired outside of formal professional training – e.g., using mobile units for training in rural areas, creating a national system for certification; and
3. Increase linkages between supply and demand for jobs (e.g., through expanding capacity of public job centers,

supporting microenterprises and increasing access to credit, and promoting professional internships. Improving dialogue, creating a labor market “observatory,” and improving the quality, frequency, and relevance of information about the job market are also emphasized.

The Government is also in the final stages of drafting a 20-year national development strategy (the *Estratégia Nacional de Desenvolvimento*, or ENDE), the main focus of which is industrialization. The draft ENDE highlights the need for skills and technology transfer, but is as yet vague on the exact mechanisms for encouraging these. It is possible, with greater analytical investment and strong leadership within government that the ENDE could become the national vision for structural transformation of the economy, subordinating other interventions (e.g., in education, transport, infrastructure, industry and commerce) to the overriding objective of structural transformation. As seen in the Indonesia case above, other countries that have benefitted from large resource inflows from extractive industries have attempted (with varying degrees of success) to use these resources to develop a proactive industrial policy that sought to support labor-intensive, non-extractive industries in order to promote job creation.

Mozambique’s government is clearly aware of these issues, considered at the March 2014 “National Dialogue on Employment” (ILO 2014). Many interventions – from reform of vocational training to provision of credit for self-employment, to a new strategy on internships, to funds for promotion of small-scale fishing, to plans for a ‘labor observatory’ to improve labor market information – are in various stages of design and implementation, though dispersed and fragmented.

Without strong, coordinated leadership, Mozambique could miss the opportunity provided by extractive industry resources for wholesale transformation of the economy and job creation. As seen in Section 1, given the direct and indirect effects of the extractive industry on the rest of the economy, it is unlikely that industrialization and economic diversification will “just happen” – in fact, without specific government actions, the reverse could happen and Mozambique could end up with an economy “cursed” by natural resources, such as in Nigeria or Angola, that derives huge revenues from oil and gas, but in which the vast majority of the population remains mired in poverty.

It is therefore urgent that more detailed analysis is done by the government in order to define more clearly what needs to be done in order to ensure a diversified and job-creating economy going forward. As revenue is already flowing from coal and from Capital Gains Taxes on sales of shares in the offshore gas developments, and as construction of the LNG plant is forecast to commence next year, this issue is becoming urgent if Mozambique is to put in places measures to avoid a “resource curse.”

4.2. SKILLS CATEGORIES & CONSTRAINTS

The Mozambican labor market can be characterized as highly segmented and facing severe supply constraints for some skills. The labor market can be broken out in the following way:

Supply constraints are evident not only for highly skilled management professionals, but also for high quality skilled technicians such as electricians, plumbers, machine operators, etc. and at certain times of year (in rural areas, e.g. during harvest season). These supply constraints exist alongside a vast potential supply of unskilled or very low-skilled workers who are predominantly rural household farmers, and alongside significant under employment of the unskilled workforce in both urban and rural areas.



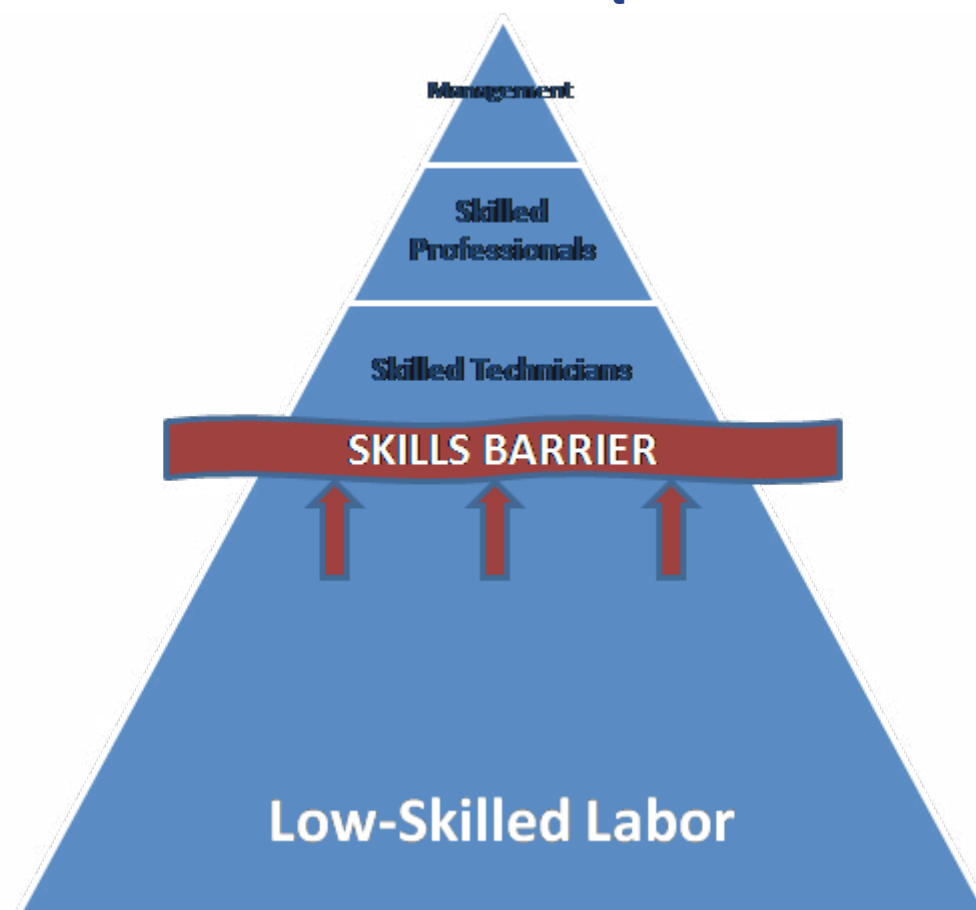
TechnoServe-assisted businesses in Mozambique

FIGURE 8: LABOR MARKET CATEGORIES IN MOZAMBIQUE

Labor Category	Examples of Occupations	Technical Qualifications, If Any
MANAGEMENT	Administration, finance, managers, strategic direction	Any occupation for which a minimum of post-graduate training and 5-10 years of professional experience is required.
SKILLED PROFESSIONALS	Engineers, scientists, senior sector experts, accountants, financial auditors, heads of departments, human resource managers, chefs, agricultural specialists,...	Any occupation for which a minimum of 4 years of post-secondary education is required, and preferably 3-5 years of prior work experience is offered.
SKILLED TECHNICIANS	Machinists, mechanics, metalworkers, electricians, carpenters, heavy machinery operators, drivers, tour guides, receptionists, food preparers, supervisors, ...	Any occupation for which specialized vocational training and certification is required, and preferably 1-2 years of prior work experience is offered.
LOW-SKILLED LABORER	Manual workers, cleaners, commercial farm labor, chambermaids, gardeners,...	Any occupation for which no training or education is required.

Source: Developed by the assessment team.

FIGURE 9: GRAPHICAL DEPICTION OF MOZAMBIQUE'S SEGMENTED LABOR MARKET



There are clearly constraints in Mozambique that make labor less mobile than theory would suggest, and that prevent the “flow” of labor from low-paid, low-productivity activities into higher paid, higher productivity activities – despite the obvious demand from these sectors. The biggest constraint to mobility between the large pool of low-skilled workers and the limited pool of skilled technicians, professionals, and managers is the skills barrier, depicted graphically in Figure 9. At a minimum, most formal sector employers require workers who can read, do math, and who bring some technical skill for which training and apprenticeship is usually required. The most lacking skills fall into two categories: technical/vocational and general “work culture.”

The skills barrier, which effectively cuts off prospects for rural labor to migrate either into the urban sector or the extractives industry and find formal employment, is explained by the low human capital base in Mozambique. The African Development Bank and OECD note in their 2012 Mozambique country African Economic Outlook report:

Mozambique is estimated to have the lowest education level among its adult population in the world at 1.2 years of formal education. The low skills level of the labor force remains a significant issue both for employers who are unable to engage qualified laborers as well as for promoting a culture of entrepreneurship. Though the education level is improving, net attendance rate for secondary school is only 20 percent. Education is free, but there are costs associated with uniforms and school supplies which present a burden for the most vulnerable households. The increase in intake in the schools has put the quality of education under pressure and has led the government to lower the requirements for becoming a teacher in order to meet demand. There are indications that the absorption of youth into the education system has meant a temporary reduction of the growth of the labor force which is currently growing at an estimated 0.4 percent per year. (AFDB and OECD 2012, 14)³⁶

The skills gap is felt at all levels of the labor market, although most severely at the top and middle of the pyramid. For skilled managerial or professional jobs, employers highlight that experienced managers are “almost impossible” to find in the local market, as were senior professional staff such as specialized engineers - which is not surprising given that these positions require not only academic qualifications but also many years of experience, which would often be gained abroad. Many of these jobs (for example general manager of a hotel, senior engineers, factory managers, finance managers etc.) are held by foreign staff. We saw little evidence of a gradual move towards “Mozambicanization” of very senior positions, although some evidence of this happening at mid-level positions, such as human resource managers, managers of specific departmental heads, or junior engineers.

More surprising is the fact that employers feel the skills gap is almost as acute for skilled technical positions, such as machine operators, factory supervisors, plumbers, mechanics, housekeepers in hotels, etc. Employers note that many individuals in the labor market, while they may have a diploma or certificate, are often unable to perform to the standard expected by companies, both foreign and national. One employer of a Mozambican manufacturing firm felt that a proliferation of courses providing certification in particular skills, without providing adequate hands-on practical training, makes it far more difficult than in the past to find employees who are “up to the job.” Companies that do not contract certain positions (e.g., electricians, plumbers) on a full-time basis, but rely instead on local contractors, feel that these contractors often lack business skills, in that they struggled for example to provide accurate estimates for work to be done, are sometimes unreliable in terms of timekeeping and availability, etc.

For low-skilled or unskilled labor employed by the formal sector, such as gardeners, cleaners, low-level construction laborers, wage labor on plantations etc, employers mention the lack of “work skills” or “work culture” as a constraint. For example, a culture of working shifts, punctuality, reliability in turning up for work every day, may be stronger among migrants (e.g., Zimbabweans, Malawians) than among the local labor force. Migrants are said to “really graft” – often for lower wages. Literacy is also mentioned as a constraint. While some companies did state that for this level they employ illiterate staff, most stated that literacy was a requirement for even the lowest skilled positions. For example, one hotel said that even the lowest skilled staff members need to be literate as there are company procedures – such as filling in

³⁶ Donors also stress the need to improve the quality of learning, as well as access. The quality of primary education in Mozambique is also very low, with preliminary results from the national education evaluation showing extremely low reading skills for third-graders in the country, according to the 2014 joint evaluation of general budget support conducted by donors.

leave forms and training courses – that require this. A number of manufacturing firms highlighted the need be able to understand health and safety regulations and training, such that literacy was a prerequisite for employment. With a 50 percent adult illiteracy rate³⁷, this in itself provides a strong barrier to job creation, even at this low skill level.

In Mozambique today, skilled labor shortages are pressing. Construction for the planned LNG plant in Cabo Delgado could start as soon as next year, creating an estimated 10,000 construction jobs for technicians with international-standard skills. Many of these jobs will exist for long periods as LNG plant construction is planned to be carried out in phases. Given this anticipated increase in labor demand, it is urgent that the scale of interventions to improve the supply side of the Mozambican labor market be increased. If efforts are not scaled up soon, the construction industry, with its nexus of contractors and subcontractors, will be able to access workers from around the globe to make up the shortfall.

The Mozambican government is understandably concerned that jobs created within the national economy should go, as much as possible, to Mozambican nationals. Currently, the Ministry of Labor operates a foreign worker quota system to regulate the size of the foreign workforce in Mozambique³⁹. However, a more comprehensive and strategic approach is required to marry the objectives of economic growth and extraction of natural resources with the objective of large-scale creation of good quality, productive jobs. Given the extreme skills gaps identified in previous sections, it is important that effort is placed not only on limiting the entry of foreigners (a short-term response), but also on massively increasing local supply and quality of skilled workers in the longer run.

When demand exceeds supply in a market, what happens? Prices rise, signaling the need for the market to increase supply. In the short run, a shortfall of rice, for example, may lead to the importation of enough rice to meet demand. In the longer run, if the economy is a competitive producer of rice, more rice may be grown to minimize the shortfall. In the case of a skilled labor shortfall, the market response is the same. Prices (wages) rise; in the short run, enough skilled labor is “imported” through in-migration (which may be regulated by foreign labor quotas) to add to meet demand. In the longer run, higher wages for skilled labor – the so-called “skills wage premium” – should encourage future and present workers to invest in the education and training required to qualify for a skilled workforce position. Developing a supply of skilled labor will, however, take longer than cultivating more of an annual food crop.

As discussed further below, this is not to suggest that nothing is being done in Mozambique to expand the supply of skilled labor. On the contrary, multiple interventions are already being carried out, some in collaboration with private companies, but not at a scale to ensure that the majority of the new, resource boom-associated jobs will go to Mozambicans. If sufficient action is not taken, the government could be faced with a dilemma. Either construction will have to slow down while Mozambicans are trained, or large-scale influx of foreign workers will have to be allowed to keep the construction on track. Another option is that the construction will be done mainly offshore, with constructed factory units imported and simply assembled onshore. None of these options is politically or economically attractive, and it will be important for the government to work closely with the companies selected for construction to ensure an appropriate balance between domestic job creation and keeping construction on track.

4.3. TECHNICAL, VOCATIONAL EDUCATION & TRAINING (TVET)

As seen in the previous section, employers are unanimous in stating that they face labor supply constraints and, in particular, constraints in finding particular skills. The March 2014 National Employment Dialogue identified “outdated and inefficient education systems, including technical and vocational training” as a major constraint to job creation.

³⁷ 2008-2012, from UNICEF, http://www.unicef.org/infobycountry/mozambique_statistics.html.

³⁸ Labor pools from the poorest countries of Asia often supply construction projects in booming economies of the Middle East, for example. Domestic oversight of such projects is required, however, to ensure that working conditions and labor rights are compliant with international standards. For a report on “the dark side of migration,” see Amnesty International (2013).

³⁹ Depending on the size of the firm, but irrespective of the sector, a company can employ foreign workers equivalent to between 1 and 5 percent of its total workforce. In theory this quota is not binding, as a company can request authorization for employment of extra foreign nationals, if it can prove that no Mozambican can be found to fill the job. However, in practice this route is extremely bureaucratic and employers complain that the decisions can be somewhat arbitrary. It should be noted that for major extractive industry firms, and in theory for other major investments, companies can negotiate much higher above-quota levels of foreign nationals directly with the government during negotiations of their investment licenses. The quota system is much more binding, therefore, on small and medium enterprises that can provide a lot of employment “around” the extractive sector and indeed in other parts of the economy. Another SPEED study (Ennis 2013) cited the frustrations of a number of SMEs who find the quota system so burdensome as to hamper their businesses.

TVET in Mozambique is managed in a fragmented way. The government needs to create a supportive environment for TVET – whether publicly funded or, as is increasingly being discussed among donors and government officials, through public-private partnerships (PPPs). The experience of Australia, which created the Australian Skills Quality Authority⁴⁰ to standardize courses and ensure minimum skills standards on which industry could rely, may be worth further study. While the Australian scheme is probably too detailed and too highly regulated for direct transplantation to Mozambique, nonetheless lessons could be learned to strengthen standardization of skills and adapted to the Mozambican context. It may also be possible that for certain skills, curricula could be ‘imported’ (and translated) rather than developed from scratch.

The country’s TVET providers include a number of technical training schools at the secondary level (generally these are three-year courses for students who have completed 10th grade); Technical Training Centers run under the auspices of the Ministry of Labor; some specialized schools run by other ministries; church and NGO-based technical training projects; as well as private sector providers for specific skills training. Despite the fact that the largest share of the government’s budget in the last decade has been spent on education, the amount allocated to TVET, which is expensive to deliver, has consistently been less than required to maintain standards and keep up with demand.

Efforts to improve coordination, in particular between the Ministries of Education and Labor, have been made through the establishment of the Executive Commission of the Reform of Professional Education (COREP), under the Integrated Program of Reform of Professional Education (PIREP), presented in Box 3.

UNIVERSITY COURSES

Mozambique has a number of public and private universities providing undergraduate and graduate degrees. A full analysis of the sector is beyond the scope of this report, but employers in general complained that while recently graduated students had often obtained theoretical knowledge, they rarely learned “real life” skills and general work preparedness.

Box 3: Program of reform of professional education (PIREP)

In 2006 the World Bank launched the 5-year PIREP under the aegis of the Ministry of Education, with financing of 30 million dollars from the World Bank and 7.5 million dollars from the Dutch (later extended to 2014), to improve the quality and responsiveness of technical and vocational education and training to labor market needs, with four components:

Institutional development support to government;

Development of curricula for competency-based vocational training in critical skills (Agriculture, Industrial Maintenance, Mining, Gas, Tourism & Hospitality, Administration & Management, and ICT);

Renovation and equipping of technical training schools and training of teachers (7 technical institutes and 3 INEFP centers); and

Competitive grants fund (FUNDEC) whereby training institutions can apply for funding for vocational training activities.

According to the World Bank, while progress on Component I has been slow, good progress has been made on Component II, including constructive engagement with the private sector to define industry needs; the competency-based curricula, originally to be implemented in 7 focus institutions, have been adopted more widely by other institutions. Under Component III the 7 institutions have received state-of-the-art equipment and teacher training. The latter was found to be essential as due to obsolete technology and many trainers being themselves out-of-date. FUNDEC, too broadly defined in the beginning, has shown progress. (Continue)

⁴⁰ <http://www.asqa.gov.au/about/about-asqa.html>

Box 3: Program of reform of professional education (PIREP) (Continue)

In 2011, the World Bank extended 30 million dollars in additional financing for PIREP through September 2014. The Project Appraisal Document for the second phase noted that several project weaknesses had been identified in internal reviews: “(i) underestimation of the time necessary for curriculum development; (ii) implementation progress being slow due to planning issues that hampered correct articulation and sequencing of activities; (iii) problems with the establishment of the national TVET oversight body; (iv) procurement problems due to the need to import most goods and services; and (v) underestimation of project costs that was exacerbated by inflation” (World Bank 2011, 4).

Nevertheless, the World Bank’s project sheet highlights a number of results, including several that exceeded original targets, i.e., the establishment of 61 competency standards endorsed by the private sector, over 4000 learners who have been assessed through these standards, establishment of comprehensive occupational standards and qualifications for 61 targeted occupation levels, 40 percent of students who have been provided with internships through their training, high levels of student success, significant numbers of teachers in target sectors who have been trained under the new system, and 19 TVET institutions now aligned to the competency-based system.

Source: Interviews and World Bank (2011)

The labor assessment interviewed two universities, one public and one private, both of which had developed systems to address the need for graduates to leave university with practical work experience already acquired.

UEM’s Engineering faculty has developed a network of potential employers of its graduates and places all students with companies for internships thus providing work experience and potential job opportunities to its students. The private university Instituto Superior de Ciências e Tecnologia de Moçambique (ISCTEM) does something similar. It has also introduced innovative “real life” simulations in its curriculum through a business lab that encourages students to interact in a virtual “business world” that teaches key management skills as well as work skills such as punctuality and reliability.

Box 4: Anadarko and UEM: Training Mozambique’s future petroleum engineers

Eduardo Mondlane University (UEM) and the U.S. petroleum company Anadarko have together set up a Master’s degree program in Petroleum Engineering, in which 25 students currently participate. Lectures are given by staff from various US universities by video link. Last year a preparatory course was given to ensure students had the appropriate grounding, and this year specific modules on Petroleum Engineering are being given. The initiative also aims to train UEM faculty in technical aspects of petroleum engineering such that in future they can also lecture on the course.

TECHNICAL TRAINING SCHOOLS

Mozambique has a network of over 90 technical and vocational training schools that provides a range of technical and vocational training courses at basic and medium levels. According to Maimuna (2014), about 5500 students graduate from the system each year. Very high drop-out rates are recorded, on average about 11 percent but as high as 66 percent in agriculture courses. The vast majority of graduates are from basic courses; in 2012 in the whole country only 545 students graduated with medium level from the industrial courses.

However, only 1 percent of total school enrollment, representing around 15 percent of secondary school students, participates in TVET courses, about 90 percent of which are in technical training schools managed by the Ministry of Education (other ministries also run some technical schools). There is general consensus among employers and other stakeholders interviewed that the quality of the training at technical schools has deteriorated significantly over the last ten years and schools lack qualified, up-to-date staff and equipment for practical learning.

One employer who has regularly received students from technical schools in Maputo and Matola for many years stated that.... “training is much worse than a decade ago... an engineering graduate today does what in the past a technician with medium-level training from a technical school used to do, and a medium-level technician today does what a basic-level technician used to do.” Efforts are being made under the PIREP program to upgrade a number of schools, renovate buildings, and provide up-to-date equipment, training etc, but needs remain great.

NATIONAL INSTITUTE FOR EMPLOYMENT AND PROFESSIONAL TRAINING (INEFP)

INEFP manages a network of training centers around the country, located mainly in provincial capitals, that provide courses in vocational trades, including accounting and administration, electrical, small business management, car mechanics, plumbing, soldering, and hotels and tourism. In 2012, INEFP graduated 706 students around the country (Maimuna 2014). Programs offered range from 15 hours for very specific courses to around 400 hours for more complex subjects. Centers are funded by student fees, government resources, and some industry contributions.

Box 5: Employability of mozambican youth

A recent study carried out by the Ministry of Planning interviewed a range of employers across the country on the general employability of Mozambican youths. The study concluded that “the general perception [of employers] was that the Mozambican youth workforce has immense limitations in terms of quality. Those with secondary schooling do not have skills that are directly applicable to industry. And those with technical or university training have received theoretical information, rather than the practical skills needed to respond to the demands of firms. Due to this, companies are obliged to offer additional training programs or recruit foreign workers.”

The study also concluded that the quality of technical and vocational training in technical schools and INEFP training centers is extremely variable. Some well equipped workshops exist, but the majority lack basic working conditions and equipment. Cases of training institute staff not being paid were also noted.

Most employers interviewed for the study rely on the newspaper to advertise vacancies, while some contact training institutions directly or use private employment agencies. Reliance on public institutions such as INEFP is weak (owing to lack of familiarity with the institution, perception of few candidates or inappropriate skills, fear of corruption/nepotism, and/or perception that big companies have first access to the limited numbers of graduates).

Half the companies interviewed stated that they offered internships, but some highlighted that there are costs to the company of doing so – equipment, insurance and no compensation for lost production or time.

Source: Maimuna (2014)

INEFP is responsive to emerging industry training requirements. For example, a new INEFP center is being set up in Palma to respond to future needs of the natural gas industry. INEFP has provided training in Tete to the coal mining industry. Mozambique’s first megaproject, Mozal, also collaborated with INEFP for training of its construction and operations staff (Box 6).

However, the ability of INEFP centers to fully meet employers' needs is limited. Only one of the centers is currently able to provide internationally recognized certification (in electromechanics). As employers say that for some jobs, health and safety concerns mean that companies can only employ staff if they have internationally recognized qualifications, the limited international certification in Mozambique effectively limits access for Mozambicans in other skills unless they are able to go abroad to train. Employers also mention that tourism courses focus too much on theoretical approaches to management and not enough on practical skills such as cooking, waiting on tables, housekeeping, inventory management, etc. INEFP is clearly very under resourced, without the financial or human resources necessary to fully fulfill the demand for skills. Its director stated in a recent interview that INEFP faces challenges in construction of new centers, providing adequate equipment, and defining curricula that respond to the needs of the market⁴¹.

Box 6 The Mozal approach to local labor training and use

Mozal, an aluminum smelter outside of Maputo, was Mozambique's first major foreign investment project. Training and hiring of local staff was a key feature of the Mozal project in both construction phases (phase I, late 1990s; phase II, early 2000s) and operations. Early project planning involving the foreign investors (BHP Billiton, 47 percent; Mitsubishi Corporation of Japan, 25 percent; Industrial Development Corporation of South Africa, 24 percent) and the Government of Mozambique (4 percent) emphasized local training. The International Finance Corporation (IFC), one of the financing partners, provided important support for this agenda. The project created employment in a number of categories: lower skilled, temporary construction work, and longer term, generally higher skilled, permanent jobs in operations. The former had shorter lead times and required shorter training than did the latter.

Construction

Terms of reference ensured that potential subcontractors bidding on smelter construction would employ significant levels of local labor and invest in training. The Engineering, Production, and Construction (EPC) contractor and all subcontractors were bound by the Project Labour Agreement (PLA), signed between the company and the Unions and witnessed by government, establishing wage standards for every category of worker. Mozal established a state-of-the-art training center in coordination with INEFP and a third-party training provider. Training courses ranged from 10 to 60 days, depending on the specific skills. Once individuals had successfully completed the training to the required standard, they received an "entry pass" to the site. The PLA stipulated that no subcontractor could employ staff without such an entry pass. This ensured that technical skills were of adequate quality and adequate training on health and safety. In total for both phases of construction, 5700 people were trained, with a 93 percent pass rate, and 72 percent were employed on the site. Total cost of the training, including equipping the training center, was 6.7 million dollars.

Operations

Over 1000 permanent jobs were created for operations. A gradual "Mozambicanization" of these has taken place, such that the initial dominance of expatriates at supervisory and higher levels has been reduced over time. By 5 years after initial operations, 75 percent of all permanent jobs were held by Mozambicans. Training for local suppliers was also carried out under the Small and Medium Enterprise Empowerment and Linkages Programme to encourage local linkages. One interviewee who worked for Mozal at the time stressed the high performance of the Mozambican staff. Everyone from (women) welders, who performed at very high standards after training, to IT (Information Technology) operators proved to be of much higher quality than initially foreseen by the company.

⁴¹ Quoted in CBE Recruitment and Selection Newsletter, 3rd December 2013.

Box 6 (continuation): The Mozal approach to local labor training and use

What lessons from Mozal?

Mozal is one of a number of megaprojects (Sasol, Kenmare, Rio Tinto, etc.) that have used predominantly Mozambican labor in the construction phase and that employ a majority of Mozambican labor in operations. This is important to note given current discussions about LNG development in Palma. Key lessons from the Mozal experience include: i) importance of high level dialogue from the beginning on labor issues between investors, the government, and unions; ii) inclusion of labor issues in terms of reference for the EPC contractor and subcontractors; iii) importance of a integrated approach to labor, led by the company, rather than each subcontractor handling issues on its own; iv) constructive facilitative role played by the IFC; v) most importantly, up-front investment in skills development paid off and enabled a largely Mozambican workforce on construction and on operations, functioning to a high level of productivity and safety.

Source: Maimuna (2014)

While new centers have been set up based on financing from specific companies, this does make INEFP somewhat dependent on the financing of big multinationals whose resources and interests may not always be aligned with those of national industry. INEFP's director stated that the decision to introduce new courses or material is dependent on INEFP's assessment of demand through discussions with companies, rather than being based on discussions with the Ministry of Planning regarding overall development strategy. Some INEFP activities seem somewhat ad hoc and dependent on individual initiatives of local directors of specific centers – one, for example, approached a recently contracted construction firm that was about to start work on a bridge to Catembe from Maputo, asking the company to specify what skills it would require in order that the center could better prepare their applicants. Such a positive, entrepreneurial approach could have even more impact if it took place at a national level and in a way that is integrated with the national development plan.

INTERNSHIPS

Internships seem to be a well used practice in Mozambique, with completion of a three-month internship often a prerequisite for completion of courses, both at technical schools and at the university level. Some schools and universities help students find internships through their networks, while others provide letters of introduction for students to find their own placements.

Employers typically support this as a very positive approach, with benefits to the firm in being able to identify the best potential new hires without the commitment of a formal labor contract, and benefits for the interns of acquiring the practical skills in demand in the labor market. Interns find that the internship enhances their employability even if not hired by the company with which they were originally placed. Box 7 presents two interns' stories.

Box 7: (continuation): Meet the interns

Natalia Mapasse – Human resources assistant, former intern

Natalia chose to study human resources because she had a family member who worked for the Ministry of Labor and was interested in the subject. She studied at the School of Labor Studies, which belongs to Ministry of Labor and used to be only for family members of Ministry staff, although it is now open to all, depending on successful completion of an exam. A three-year course of study is followed after secondary school; in order to complete the course she had to do an internship and prepare a report on her placement. On finishing the internship, the company offered her a position, where she has now worked for just over a year.

Box 7 (continuation): Meet the interns

After finishing 12th grade Gimo heard from friends about a church-financed vocational school. The school had begun informally, but received its official certification just before he enrolled. He studied for 6 months full time to gain a certificate as an electrician. He paid 3000 meticals (approx. 100 dollars), in installments. No one in his family is an electrician and he does not know any electricians personally, but he was motivated by what he “believed would be useful.” Hearing from a teacher about a company that sometimes hires its interns, he applied there for an electrician internship. Currently in his second month, he does not yet know if he will be kept on by the company after he completes the internship, nor what he would earn if he is retained.

4.4. LABOR MOBILITY

Labor mobility implies the ability for labor to move between one segment of the labor market and another – whether it be “upward mobility” (i.e., starting as a junior and being gradually promoted over time to higher, more highly paid positions) or mobility between sectors (e.g., out of agriculture into construction or out of tourism into extractive industry). Given the lack of skills at every level, and in particular at the lowest level of the formal labor market, as outlined above, intersectoral labor mobility in Mozambique is severely impaired.

With regard to upward mobility in Mozambique, there is some evidence of companies promoting from within – but at times ceilings are reached due to lack of literacy or skills. One example was a supervisor in the mining industry who has demonstrated good learning ability and been promoted to supervisor, but cannot progress further as he is functionally illiterate. Middle management is often Mozambican in foreign-owned firms, but the senior management often (although not always) remains foreign, effectively creating a barrier. There is also a seeming disincentive to provide good quality training for highly skilled staff, on the basis that they may be poached by another firm after training.

For the Dutch Disease argument, labor market mobility is assumed to enable labor to flow between sectors of the economy, in this case, from tradables to non-tradables. This is problematic, even in developed labor markets, as some skills are sector-specific, or even company-specific. However, while labor is physically mobile within the rural sector, between rural and urban sectors, and among higher skilled labor, from south to center and north, the Mozambican labor market does not display much labor mobility in the sense of Dutch Disease-incurred intersectoral movement. The barriers to entry into the formal sector, as seen above, on exiting agriculture, are significant, and we saw little evidence of this occurring, apart from when companies had specific agreement as part of their investment plan agreed with government to employ locally. Even when this happened, local people tended to be hired to do the most basic jobs (as skill levels were very low) and resented better-skilled or better educated people moving in or brought in from outside the area for more highly paid jobs.

There does seem to be some movement of rural households to diversify their income sources by engaging not only in agriculture but also other ‘non-farm’ activities or setting up small household enterprises. There is evidence of small-scale informal businesses being set up around mines, for example – bars, local restaurants, small-scale commerce, etc. As Fox and Sohnesen (2013) point out, small household enterprises can be a significant source of jobs and of increased welfare for households, and may over time enable households to invest in education and skills acquisition for younger members to eventually transition to the formal economy. However, with 300,000 new entrants into the labor force each year, the formal economy will not in itself be able to absorb most of those seeking work.

4.5. LABOR MARKET INFORMATION

Another aspect of labor market mobility is the ability of labor to move based on information received – whether about job opportunities, higher wages in one sector or another, better conditions, etc. The information can provide ‘signals’ to labor to invest in particular skills, migrate, or push for higher wages. Labor market information in Mozambique, as in many developing countries, is scarce, incomplete, and poorly disseminated. This can lead to a mismatch of supply and demand of labor, as employers need particular skills, or need particular numbers of workers at certain times, but workers available to work do not know which skills to invest in, or where to find work.

The government has a number of sources of data that could be used to provide a more complete picture of the labor market and underpin labor policy. However, these sources are not comparable and there is little capacity within the government to carry out labor market analysis.

The last full scale survey of the labor market was carried out by INE in 2004/5. INE also collected some data on employment in the short-lived INCAF panel household survey, but this unfortunately has been suspended. The CPI collects data on jobs created in the formal sector through investment projects – but this is only for jobs projected to be created by those companies that go via the CPI and only for the formal sector. The Ministry of Labor produces some basic information but this is not published. INSS (Instituto Nacional de Segurança Social – Social Security) has a database that could provide information on formal sector (social security-paying) companies. Five-yearly household budget surveys provide some information on ‘main source of income’ but the latest was in 2008/9 and the definition of ‘main source of income’ does not adequately reflect the complexity of household labor market strategies. The TIA (Trabalho de Inquérito Agrícola) agricultural household survey again provides some information about household income generation. INEFP centers also have registers of people seeking work and employers seeking workers, but many workers and employers do not register.

Nor do data seem to be available regarding particular skills and qualified professionals needs, which might enable a more nuanced approach to the authorization of foreign workers for specific positions (see below).

In order for there to be an efficient matching of jobs available with workers offering their services, employers and prospective employees need to ‘find’ each other. In a country such as Mozambique where infrastructure and telecommunications services remain poor, this presents particular challenges.

Firstly, there seems to be no formalized service to help young people and their families make decisions about their education – whether to stay on at school, what to study at school, whether to study at a technical secondary school, which courses to study, etc. It may be that some young people drop out of school because of a lack of information about possible alternatives or the likely returns to investment in particular skills. Even at universities there do not seem to be ‘careers services’ as are often present in developed countries to help students decide in what to specialize and on which branch of their chosen industry/profession to focus. While this partly depends on the aptitude and personality of the individuals involved, better information about future labor demand and wage levels across different types of jobs would be of help in facilitating ‘market signals’ to be better interpreted and acted upon by young people.

Universities do display some understanding of this and do make contacts with employers through their networks, but this seems to depend on the particular lecturers and companies involved rather than a concerted effort to place students and track their progress. Interviews with the national youth council confirmed that most students choose their degrees based on family connections, impartial information, and “what they like at school,” and that students have little idea when making these choices what opportunities these will bring in the future. While the same is true to some extent of students around the world, poorer Mozambican students are particularly disadvantaged in not having recourse to formal career services, as many will be the first in their family to be able to contemplate formal sector work. The levels of information in rural areas about the possibilities and returns to further education and exposure to people who have been through a higher education institution are both extremely low. Moreover, vocational training and employment still carry a social stigma,

though skilled technician occupations can be highly remunerative. Currently, where simply having a degree is effectively a passport to a formal sector job in Mozambique, this may be a less serious concern than in the future but students agreed that both labor market information and exposure to role models or mentors might have kept others in school or encouraged them to invest in higher education.

Secondly, we found that there is little information flow about vacancies, wage levels, and labor demand for those already in the labor market. One example of this was a combined plantation and agro-processing company which received labor from many parts of the country during the harvest – however, in some years not enough labor was supplied, and in other years, there was an excess so that some people who had travelled from distant provinces (investing their own funds to do so) had to return home without securing a job. A labor market observatory, long-planned under PIREP, was recently approved for implementation under MITRAB. It aims to bring together government, labor, and private sector representatives to create an information basis and forum for information exchange.

In an ideal world, such an information system would inform Mozambicans of current and expected structure of the labor force in Mozambique (employment by sector and occupations within sectors, ideally broken out by province), occupations for which employer demand is expected to rise in the next five years, education or training requirements for those occupations, and earnings of entrants into and more senior job holders in those occupations. More realistically, it would help if information about current job openings could be posted more widely⁴².

4.6. FIELD ASSESSMENT CONCLUSIONS

To summarize conclusions from discussions with employers, employees, students, unions, government officials, and international organizations:

- The need to address the impact of the upcoming boom in extractives – and the role of labor and skills in this – is recognized widely by government.
- A large array of existing initiatives aims to address specific aspects of the labor market (skills, self employment, data etc). However, these are not subordinated to a coherent national strategy for industrial transformation and job creation, as has happened in other countries.
- The draft National Development Strategy (ENDE) could play this role – but only if accompanied by a more detailed analysis and operational plan, and only with high-level support to make this the national vision to which all other sector strategies should be subordinated.
- Skills shortages are felt fairly low down the “skills pyramid” – employers face severe difficulties finding not only professional management staff, but also qualified skilled technicians. Yet the barrier for unskilled or low-skilled workers to move up the skills ladder is fairly impermeable.
- Current institutions for TVET are under-resourced; while efforts are underway to reform curricula, provide modern equipment, and expand services, none of this is close to being sufficient to address current needs, let alone those that would emerge under a specific industrialization policy.
- While the development of national certification standards is laudatory, coherence should be sought with internationally recognized certification standards, in order to assure Mozambican trainees the ability to access jobs and/or move abroad to work in their skill areas, if so desired.
- Intersectoral labor mobility is limited; geographic mobility within labor categories is common.

⁴² Some employment agencies do publish job listings, either online or in print media, but the geographic coverage of their outreach is unknown. Some specialized employment agencies aim to match employers’ demand with labor market supply in Mozambique. However, these tend to focus on employment matching in the highly skilled, highly competitive formal sector, rather than providing general information that would aid labor market mobility in general.

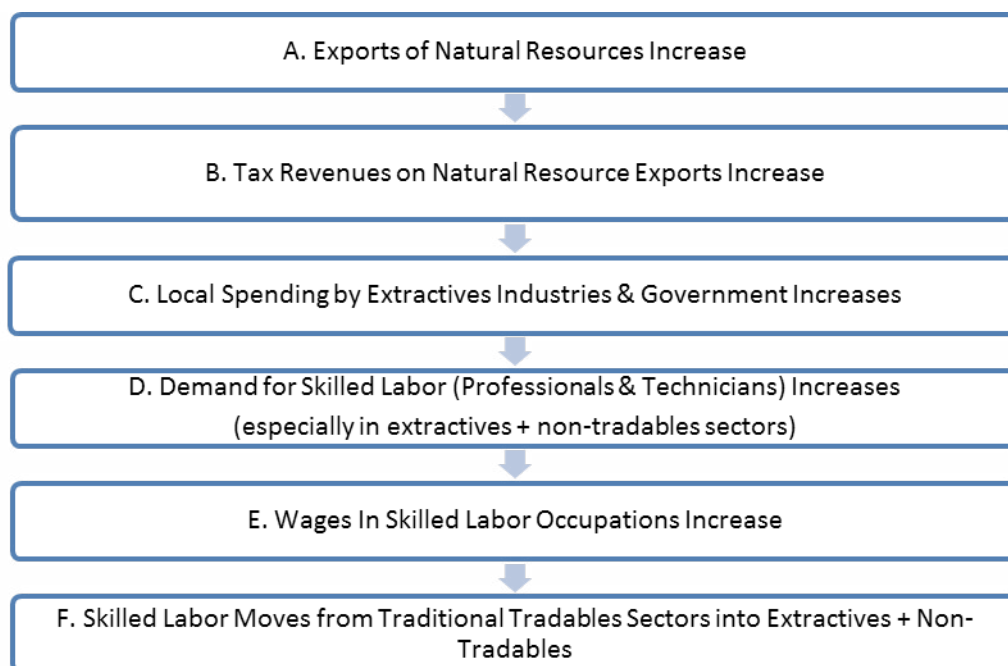
- Labor market information is weak, fragmented, and not formally disseminated.
- The minimum wage is an important reference for companies, even those who pay above. At lower skills levels, where labor is easier to find, companies tend to have a fixed wage per position. For jobs requiring higher skills, wages are determined more by individual negotiation and market rates.
- Unions have a moderately important role to play in wage setting, particularly for lower skilled workers.
- Due to shortages of skilled labor, employers seek to hire foreign workers. There is a need for a more comprehensive, long-term strategic to the regulating of foreign workers, possibly based on better information about real skills gaps in the country.

The question remains, will the current multitude of interventions outlined above be enough to close the skills gap in time for Mozambique to have a sufficiently skilled workforce to benefit not only from the extractive industry boom, but to permit a diversification of the economy and inclusive, widespread job creation for all? Can the government seize the initiative, and define how the economy should be developed – and therefore, what skills should be being developed – rather than reacting to demand once it has emerged?

5. SUMMARY OF EXPECTED IMPACTS OF DUTCH DISEASE ON LABOR MARKETS IN MOZAMBIQUE

The threat of Dutch Disease in Mozambique is real. Although both foreign aid and foreign investment inflows have already been factors in the economy, flows of foreign exchange receipts via tax revenues from the extractives industry are expected to accelerate significantly in the next ten to twenty years. Pressures are already being felt in the local economy in terms of rising real estate values⁴³ and rising wage pressures for highly skilled labor. Some speculate that the future value of the metical may rise to twice its current value, relative to the dollar, i.e., an exchange rate of 15 meticals to the dollar, all else remaining the same.

FIGURE 10: UNFOLDING OF DUTCH DISEASE



⁴³ See the SPEED blog post on this topic, <http://www.speed-program.com/blogs/by-subject/competitiveness-by-subjects/mozambique-real-estate-market-bubble-a-real-cause-of-concern>.

With the natural resource boom already underway since the mid 2000s, Mozambique is already experiencing stages A through F. To be able to assign parameters to the continuation of the logical chain of impacts in Figure 10 beyond stage F, one would need to know the following:

First, what is the expected level of increased demand for labor as a result of the boom:

- What is the expected government investment program in infrastructure and social services, as a result of the resource boom, and what employment multipliers are associated with such spending?
- What is the likely level of “local content” expenditures by the extractives companies, and what employment multipliers are associated with such spending?
- What are the likely levels of private investment in industrial, commercial, and residential construction; manufacturing; services; infrastructure; and hospitality/food service sectors that may be spurred by opportunities associated with the resource boom, and what employment multipliers are associated with such spending?
- Second, to what extent will Mozambican labor be able to move in response to perceived new opportunities, and how substitutable are different labor market segments for each other:
- What is the “substitutability” of skilled labor employed in agribusiness, tourism, and industry, for skilled labor demands in the extractives industries?
- What is the “substitutability” of rural, largely unskilled, labor for skilled or low-skilled labor demands in the extractives industries?
- How physically mobile and entrepreneurially flexible is rural labor?

Given answers to the above, what can be done to help mitigate potentially negative effects on labor markets and on the competitiveness of Mozambique’s traditional sectors?

While quantitative parameters to answer the above questions are unknown, the assessment team nonetheless draws the following inferences from the explorations conducted to date:

1. The natural resource boom is already unfolding in Mozambique, although the full extent of the macroeconomic phenomenon known as Dutch Disease is unlikely to be felt in full force for some time. Tax and export revenues from LNG sales are not expected for some time, although coal exports and associated revenues are already on the rise. As increasing numbers of megaprojects come online, the inflow of foreign investments and investors will be increasingly felt both in Maputo and near the exploration and extraction sites. Already, upward pressures on housing and commercial real estate markets, as well as in markets for skilled labor, are in evidence.
2. Segmentation of labor markets in Mozambique today – management, skilled professionals, skilled technicians, on the one hand, and low-skilled labor, on the other – is significant. With supplies tight, wage pressures are already being felt for managers, financial professionals, human resource managers, and other professionals. Specific technical skills, however, may be required, e.g., a human resource manager is no substitute for a petroleum engineer nor is a private chauffeur a substitute for a hydraulic mining shovel operator. The labor assessment team heard numerous accounts of the tight available supply not only for managers and other skilled professionals, which is to be expected, but also in the category of skilled technicians, i.e., workers whose occupations require training, apprenticeship, and (possibly) certification. This puts great pressure both on skilled labor wages, for which an increasing premium is being paid in Mozambique’s labor market today, and on the foreign labor quota system, which presently regulates the volume of workers that may be “imported” from off-shore to compensate for the present skills gaps.
3. Due to real skills barriers low-skilled labor is largely NOT substitutable for the labor required by the extractives and other associated, surging sectors of the economy. Four-fifths of the workforce is rooted in the agricultural sector, where poorly educated, largely illiterate Mozambicans work hard to earn their livings. They generally pursue

some combination of subsistence agriculture, agricultural wage labor, off-farm wage labor, and self-employment via household enterprises to support themselves and their families. They may move within Mozambique or more broadly within the region (especially to South Africa) in search of casual, seasonal, or more steady employment, remittances from which help to support families back home. Though hard-working, this labor pool lacks a minimum set of “soft employability skills,” which includes inter alia demonstrated prior work experience and ability to hold a steady job; basic reading skills; communication skills; demonstrated ability to work and problem-solve as part of teams. This unskilled labor pool also lacks the technical skills required by formal sector employers. Since rural labor is unlikely to be hired into the extractives or non-tradables sectors in significant numbers, the expected impact of possible Dutch Disease on wages in the rural sector is likely to be minimal.

4. Yet the witnessed acceleration in mega-project approvals in Mozambique has raised expectations that the extractives industry will provide new jobs for Mozambicans. It has, and it will, but only for a small number of skilled workers. Government and companies will need to manage expectations of local communities, and in particular address social unrest which could occur due to migration of labor from outside resource-producing areas.

The construction firms that will build railroads, ports, processing plants, warehouses, offices, and housing in support of the extractives will certainly provide more employment opportunities than will the extractives directly. However, these jobs are likely to be for skilled trades people, e.g., boilermakers, construction equipment operators, heavy vehicle and mobile equipment service technicians, electricians, plumbers, and welders. These occupations require some level of education, training, and certification⁴⁴. Thus, except for the most basic occupations, the rural labor pool is unlikely to find regular employment in the extractives industry or in the construction activities that will surround it.

The government of Mozambique would do well to emphasize that the country’s economic future will depend on trained or educated workforce development. This message is not well understood by the public and needs to be broadly disseminated to encourage rational decision-making about labor migration, small business growth and investments near extractive industry locations, and even delayed school-leaving in favor of more education and skills-building. The message does also not appear to be well understood by government, leading to such counter-productive policies as restrictive foreign worker quotas that may have the unintended consequence of discouraging new investors from seeking to do business in Mozambique.

Instead, it should be the highest priority to establish a national employment policy⁴⁵ – putting employment at the heart of all government strategies, and more specifically a national workforce development strategy. Said strategy should consider a program to provide occupational outlook information to Mozambique’s youth, so that they can make smart decisions about their schooling, and invest in training or upskilling existing cadres of vocational trades that are needed not only to build Mozambique’s extractives plants but also its seaports, airports, roads, and energy and communications infrastructure.

5. In the short run, skilled labor demand will be met through “imports” of foreign workers. The cliché of the “global marketplace” applies to labor markets as well. In the short run, faced with immediate skills supply constraints, employers seek to negotiate with the Mozambican government foreign worker quotas that will allow them to access skilled labor from outside Mozambique. Without such access, international companies will weigh alternative options for extraction industry development, such as the construction of off-shore, floating facilities or off-shore construction of modular processing facilities that can be shipped to Mozambique for local assembly. In the longer run, as the diamond industry beneficiation example from Botswana and the Mozambicanization of labor in the Mozal example both demonstrate, it can make strategic sense for employers and government to partner in the development of education and training opportunities for Mozambicans to supply skilled technician and professional job candidates in the coming decade.

⁴⁴ For examples of occupational profiles and training and certification requirements in the United States, see the 2014 Bureau of Labor Statistics’ Occupational Outlook Handbook, published every two years and available online.

⁴⁵ This was a recommendation coming out of the ILO employment conference held in Maputo in March 2014.

6. Nonetheless, it is likely that some of the more ambitious or entrepreneurial will seek to move to areas of resource extraction activity. For example, this has already been observed in and around Moma where Kenmare's heavy sands operations are based. It is thus all the more crucial that the business environment – by which we mean regulations and their uniform implementation, as well as the availability of financing – be made conducive to establishing household enterprises, whether in retail, food service, transportation, security, household help, or other service provision that is likely to spring up around mining and other extractives' sites.

7. It is impossible to predict levels of expected investment spending by government, the extractives industries, and other private investors. But the greater potential for resource boom-led job creation lies in labor-intensive public works projects financed by public revenues and the growth to be generated by associated private investment.

8. Under Dutch Disease pressure, as the value of the metical strengthens and profitability is squeezed, companies will be forced to review their cost structures. More in-depth analysis will be conducted by companion SPEED studies in agriculture, manufacturing, and tourism. However, as local prices of tradable goods, determined in international markets in US dollars or euros and converted into metical, will fall, and the cost of Mozambican labor, viewed from the global market in dollars or euros, will rise. Companies will have to consider, inter alia, whether to retrench some percentage of their workforce, switch to less expensive imported labor, or invest in labor-saving machinery, which will be less expensive, in metical terms, in the wake of currency appreciation.

For example, if the value of the metical were to rise from 30 metical/dollar to 15 metical/dollar, this would double the price of Mozambican labor in foreign currency terms, all else being equal. In order to remain competitive with (already less expensive) workers in, for example, Southeast Asia, the productivity of Mozambican workers needs to rise significantly to compensate for their higher cost. Human capital development, upskilling of workers, and investments in higher value-added sectors of the economy will be needed if those higher wages (expressed in dollars or euros) are to be deemed affordable by investors.

9. In the longer run, Mozambique's competitiveness will be enhanced not by requiring companies to use low-skill Mozambican labor, but by investing in a high-skill Mozambican workforce. Competitiveness, as Webber (2013) emphasizes, is not about costs, though costs surely affect corporate decision-making, but also about labor productivity, skills, innovation, and value chain differentiation. For Mozambique to successfully employ its natural resource "blessing" to embark on structural economic transformation, creating new industries and services employment opportunities for the country's future workforce, it must invest now in its people.

As described earlier, labor market efficiency and how the economy responds to Dutch Disease pressures depend on the extent to which barriers impede movement between segments of the labor market and how well information about the labor market opportunities is transmitted. Labor market information – present and expected labor demand and supply; wages by region, sector, and occupation; skills and certification requirements by occupation; working conditions – is extremely hard to come by, not only for expected labor market entrants, but also for workers already in the labor market who seek to change their work portfolios. Currently little information is available – on career options, employment opportunities, income-earning potential, or training requirements – to offer youth reasons to stay in school and choose particularly in-demand skills to learn.

As nuanced in Figure 12, opportunities for employment growth in Mozambique may or may not be realized, depending on 1) how successfully the government can communicate expectations about future labor market evolution to today's youth who are making education and training decisions that will affect their entry into the labor market 3-5 years from now, and 2) whether coordinated efforts can be mounted to provide improved education and training opportunities to youth that respond to those expectations.

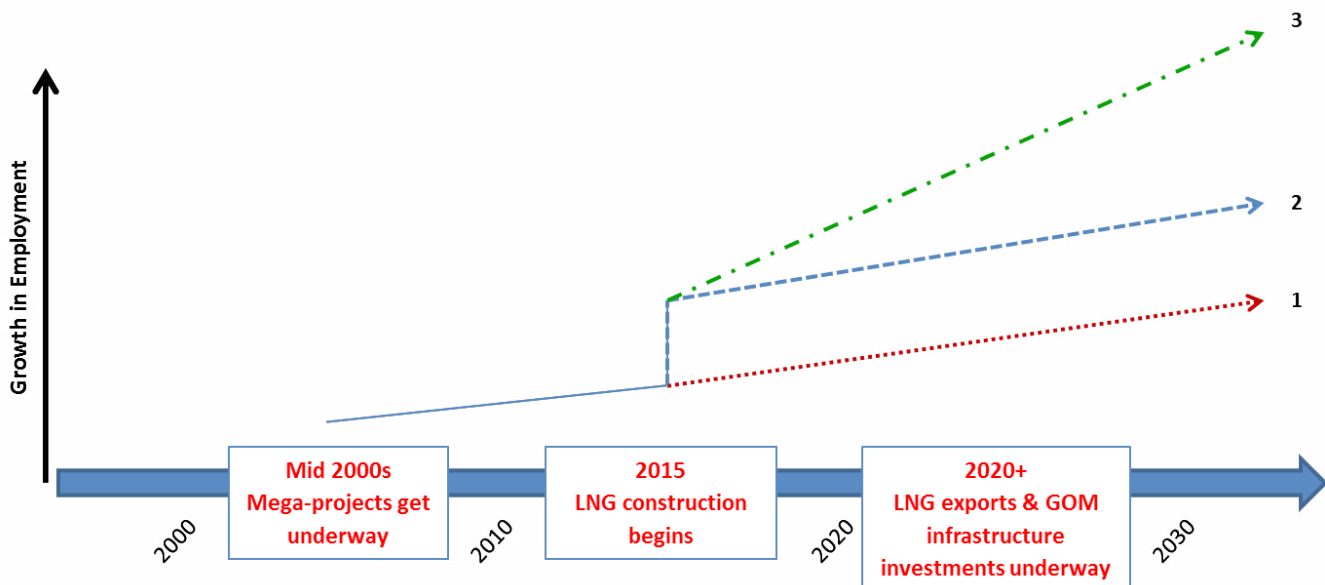
If a more comprehensive training effort is not mounted, the economy will likely not enjoy a strong bump-up in the level of employment (Scenario 1 below). Under such a scenario one might imagine various winners and losers from the natural resource boom, as summarized in the matrix next.

FIGURE 11: POSSIBLE WINNERS AND LOSERS UNDER SCENARIO 1

	‘Winners’	‘Losers’
Exchange Rate Effect	<ul style="list-style-type: none"> ▪ Consumers of imported goods ▪ Importers ▪ Companies that use mainly imported raw materials and inputs 	<ul style="list-style-type: none"> ▪ Agriculture (producing for export or to substitute for imports) ▪ Exporters ▪ Alternative investment opportunities
Boom Effect	<ul style="list-style-type: none"> ▪ Skilled people ▪ Extractive industries ▪ Suppliers to the extractive industry ▪ Transport ▪ State and tax authority ▪ Service providers – e.g., hairdressers ▪ Construction & construction material producers ▪ Banks 	<ul style="list-style-type: none"> ▪ Unskilled people without access to training ▪ Farmers ▪ SMEs ▪ Manufacturing firms ▪ Tourism companies

If training efforts only remain focused on the skilled technicians needed for rapid expansion of the extractives industry, there will be a short-term bump-up in employment, with longer term expansion continuing at an unchanged rate (Scenario 2). However, coupled with government and private sector investments to promote growth in other, labor-intensive sectors of the economy (infrastructure development, real estate, in addition to investments to increase productivity and innovation in traditional tradables, such as agriculture, manufacturing, and tourism), Mozambique should be able not only to enjoy a short-term bump-up in employment but also to embark on structural transformation of the economy that will enjoy accelerated level of employment growth over time (Scenario 3).

FIGURE 12: SCENARIOS OF POSSIBLE IMPACTS



The likelihood of success in achieving Scenario 3 will be enhanced if the Mozambican government finalizes its National Development Strategy, targeting a strategy to allocate future revenues from natural resource exports to grow the economy by investing in labor-intensive sectors, the returns to which will position the country for dynamic, structural transformation. Building transport, trade, and telecommunications infrastructure, providing support to labor-intensive agricultural schemes, luring investments for labor-intensive manufacturing, and expanding human capital investments to raise literacy, numeracy, technical, and management skills, will provide the foundation for Mozambique to capture benefits from, rather than be undone by the Dutch Disease effects of, an expanding extractives industry over the next two decades.

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■ Emídio Mavila, Ministry of Labor, Division of Planning, Cooperation, and Statistics, Director

■ Lourenço Sambo, Center for Investment Promotion, Director-General

■ Luís Eduardo Siteo, Ministry of Agriculture, Economic Advisor

■ Emílio Ussene, Center for Investment Promotion, Project Management Services, Director

■ Private Sector

■ Angela Beresford-Miller, Berry Construction, Administration and Accounts Manager (by questionnaire)

■ Emmy Bosten, Energyworks, Director

■ Américo Celestino Chirruque, Companhia Industrial de Matola, Human Resource Director

■ Bruce Chapman, Southern Sun Hotel, General Manager

■ Gareth Clifton, Kenmare Resources PLC, Mozambique Manager

■ Gimo Felizberto, Maeva Oils, Intern Electrician

■ Andrew Fimister, Maris Capital Ltd., Founding Partner

■ Jane Flood, Maputo a Pé, Owner

■ Gabriel Fossati-Bellani, Pembaland, Partner

■ Fernando Gruenberg Stern, Radisson Blu Hotel, General Manager

■ David Hackey, Hotel Cardoso, Deputy General Manager (by questionnaire)

■ Natália Mapasse, Maeva Oils, Human Resources Assistant

■ Daniel Mondlane, Maeva Oils, Executive Director

■ Rui Monteiro, Turconsult, Owner

■ Paulo Negrão, GAPI Investment Company, Commercial Director

■ Nyasha Nyaruwate, Rainbow Hotel, General Manager (by questionnaire)

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CHAPTER 2.3
**MOZAMBIQUE'S NATURAL
RESOURCE BOOM:
WHAT POTENTIAL
IMPACTS ON AGRICULTURE'S
COMPETITIVENESS?**

**Jahamo Calima, Maria Nita Dengo,
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October 2014**

EXECUTIVE SUMMARY

Mozambique has consistently figured among the top ten African countries, ranked by economic growth rates, for over a decade. Prospects indicate this will be sustained in the coming years, fueled by the natural resource boom. How can this opportunity be capitalized upon so as not to jeopardize the livelihoods of 80 percent of the population who rely on the agriculture economy? What could the boom mean for the smallholder farmer growing rice in Xai-Xai, cotton in Niassa, tomatoes in Moamba District, soybeans in Zambezia, or to the Mozambican and foreign agribusinesses and agro-partnerships engaged in plantation agriculture, such as bananas for export? What would a worst-case Dutch Disease scenario look like, and how might its worst effects be mitigated?

Stimulated by the questions above, the Support Program for Economic and Enterprise Development (SPEED), a program of the US Agency for International Development (USAID), and its partner, the Confederation of Business Associations in Mozambique (CTA), have launched a suite of studies that explore the potential impacts of the natural resource boom on currency appreciation, competitiveness, the Mozambican labor market, and its core, traditional, tradable economic sectors, namely, agriculture, tourism, and manufacturing.

Mozambique's resource base encompasses not only minerals and energy products, but also arable lands, river systems, and normally benevolent, but sometimes unpredictable, climate. Its agricultural potential, highly touted in strategies and action plans, has encouraged investors to contribute their capital, technology, production know-how, and export market linkages to expand, innovate, and improve agricultural horizons in Mozambique.

Whether Mozambique's farmers grow foods for domestic consumption in substitution for imports or produce commodities for sale across borders or across seas, the incentives they face are strongly affected by economic forces, some local and some that occur beyond Mozambique's borders. Three factors – (1) exchange rates of the metical with global currencies, (2) regional and international market prices, and (3) domestic costs of production – influence the incentives faced by Mozambican farmers and whether locally, regionally, or globally produced foods will be consumed in Mozambican households or sold in regional and global markets.

Five agricultural value chains – bananas, cotton, rice, soybeans, and tomatoes – are explored here, selected with input from agricultural private sector representatives as examples of what might happen in the case of strong appreciation of the metical in the wake of the natural resource boom. Two (bananas and cotton) are mostly grown for export, two (rice and tomatoes) are fundamental foods in Mozambicans' diets that are imported to meet the shortfall in domestic production, and the fifth – soybeans – is a rapidly growing crop that is grown, at present, as a feed input for poultry operations.

Value-chain summaries are presented for each of the five commodities, exploring production, processing, markets and trade, cost structure and drivers, and profitability analyses. These latter are conducted first in “financial” terms, that is, seen from the perspective of the producer, considering only the financial costs that she or he incurs in the growing and marketing of each crop, valued at the prices that she or he actually pays. Family labor, in the financial profitability analysis, is thus valued at zero. Profitability is also estimated in “economic” terms, i.e., valuing all factors of production and intermediate inputs at their opportunity costs and net of any taxes or subsidies that may be applicable. In the economic analysis, family labor is valued at prevailing market wages. The analysis also looks at sensitivity of results from a) 50 percent strengthening of the metical, from 30 to 20 metical/dollar¹, and b) a scenario that combines the metical appreciation with an improvement in farm-level yields. Results are summarized next.

¹ At 30 metical/dollar one metical equals 0.033 dollars. Appreciation to 20 metical/dollar means that one metical equals 0.05 dollars. The increase in value is thus 50 percent ($0.05/0.03333 = 1.50$). This is a “worst-case” scenario that proxies a range of possible Dutch Disease-type impacts on the nominal exchange rate, government spending, levels of domestic prices of non-tradable goods and services, and thus the real exchange rate.

ECONOMIC COST-BENEFIT RATIOS (BASE CASE, EXCHANGE RATE, AND YIELD SIMULATIONS)

	Reference Market	Economic Profitability		
		Base Case (Yield)	@ 20 metical/dollar	@ 20 metical/dollar with Yield Increase
Bananas	CIF Europe	0.40 (40 T/ha)	0.52	0.44 (52 T/ha)
Cotton	FOB	0.67 (0.7 T/ha)	1.01	0.79 (1 T/ha)
Rice	Maputo	1.41 (4 T/ha)	1.74	0.98 (9 T/ha)
Soybeans	Entry, feed mill	0.71 (1.2 T/ha)	0.96	0.81 (1.5 T/ha)
Tomatoes	Maputo	0.43 (40 T/ha)	0.51	Not needed

Source: Study Team Analysis

As seen in the table above, the base case analysis suggests that bananas, cotton, soybeans, and tomatoes are economically profitable (economic cost-benefit ratios are less than 1.00) at current costs, yields, and world prices, whereas rice is not (cost-benefit ratio is 1.41). However, should the metical strengthen to 20 metical/dollar, cotton and soybeans look vulnerable (cost-benefit ratios very close to 1.00) and the negative economic profitability of rice is accentuated. The combination of a stronger metical with a 25-45 percent increase in yields restores economic profitability to cotton and soybeans; however, more than a doubling of yields (to 9 tons of paddy rice per hectare) is required in rice, all else equal, to compensate for the metical's simulated appreciation.

Earlier analysis by Salinger and Ennis (2014a) suggested that labor market segmentation is sufficiently strong to prevent upward pressure on wages in the rural sector. Thus, no simulations were undertaken of an increase in rural labor's economic price. However, high costs of logistics (transport, port charges) and inefficiencies in agro-processing (cotton, rice) are also concerns.

Analysis of this kind is useful to highlight the potential resilience or vulnerability of these five commodities to possible Dutch Disease pressures. Particularly for rice, cotton, and soybeans, the analysis underscores the importance of raising yields in order to be able to withstand possible macroeconomic shocks. Improvements in cotton ginning and rice milling technologies to improve processing yields and thereby reduce costs would also improve competitiveness. Bananas and tomatoes, on the other hand, appear to be quite resilient to exchange rate shifts. However, they face their own competitive threats, from pests and disease and high export logistics costs (bananas) and significant import competition from more competitive South African producers (tomatoes), aided by a depreciating rand.

This work has also surfaced the importance of a number of policy questions that affect dimensions of competitiveness, although since they are not directly related to the natural resource boom they are not the explicit focus of this study. These include:

- How do land markets work today in Mozambique, especially in the face of rising interest from foreign investors and especially in Mozambique's highly prized, irrigated land areas; what land use rights institutions provide the right balance of user protections and incentives to invest in higher value-added agriculture?
- What is the productivity of labor in Mozambique, by sector, how does it compare with the official minimum wage in agriculture and market-determined rural wage rates? What impact does the official minimum wage for agriculture have on the availability of wage labor, employment, migration, and actual wages paid to rural workers?
- What more can be done to encourage the use of improved inputs by farmers? What role could agroprocessors, such as rice mills and cotton ginning companies, play a more active role to contract with farmers and act as an extension services and input dealer intermediary?

- While “land grab” stories have claimed plenty of international attention, a more serious look at, for example, the role of Chinese assistance in African agricultural development (Brautigam and Ekman 2012) paints a very different picture of government-led development seeking technical assistance from Chinese companies to raise technological ceilings of crop agriculture. How to assure balanced reporting regarding the role of foreign investors in Mozambican agriculture today?
- What is the appropriate formula for setting local producer prices? In Mozambique, most commodity prices are market-determined. However, in the case of cotton, producer prices are set using a formula that takes recent world cotton lint prices into account. Without incorporation of a futures price, and with producer prices fixed per growing season, ginning companies bear the risk of a commodity price drop during the season (as described by Tshirley et al. 2009 regarding West African cotton sectors in 2004).
- Improved post harvest technologies for harvesting, threshing, drying, and storage will improve the quality of stored grain and thus increase the likelihood that agro processing facilities will be able to use locally sourced, rather than imported, raw materials. More work is needed to understand to what extent these bottlenecks arise from policy, infrastructure, legal/business environment, and/or technology constraints.
- Infrastructure constraints are well-recognized, not only in Mozambique, but across Africa. It could be useful to develop a grid to aid decision makers in prioritizing infrastructure investments by highlighting those arable zones of the country with greatest potential for agriculture whose potential goes unfulfilled due to insufficient road density.
- Mozambique depends on trade for food security. In some cases, this is to bring needed foods in from global markets (rice) or from countries in the region (maize, some horticulture). In some cases, food security is enhanced by exports, allowing producers to earn income through sales of cash crops (bananas, cotton). In yet other cases, diversifying into new cash crops (soy) is dependent on vigilance against unfair trade practices to ensure that Mozambican food producers (poultry) are not faced with unfair competition from dumped food products. Efficient physical, human, and software infrastructure to facilitate trade is a crucial dimension of food security.
- Exchange rates are a crucial conversion factor that translates foreign into domestic costs/prices. There is little Mozambique can do when the currency of its most significant trading partner, South Africa, depreciates. However, the experiences of producers, processors, and traders with bilateral trade flows over the last two years provides an interesting lens through which to consider the effects of an appreciating metical. The economic impacts of shifting trade with South Africa to illustrate the potential, broader impacts of Dutch Disease (Salinger and Ennis 2014b).

The report concludes with key takeaway messages about the importance of recognizing the potential threat to agricultural competitiveness of the natural resource boom, especially for traditional agricultural commodity producers, and of building a strategy to anticipate, manage, and respond to it. This will involve plans to manage natural resource-derived revenues directly, build productivity and invest in infrastructure that will enhance competitiveness and better resist competitive threats, and monitor and publicly exhibit Dutch Disease indicators in order to give the economy early warning of possibly building pressures.

The report lays out a conceptual framework for understanding natural resource booms and their potential economic impacts and definitions of agricultural sector competitiveness (Section 1), provides an overview of the role of agriculture in Mozambique (Section 2), introduces the approach used in this report (Section 3), presents findings of five value-chain assessments undertaken for this study (bananas, cotton, rice, soybeans, tomatoes) (Section 4), summarizes and offers thoughts on policy issues and key messages (Section 5).

1. NATURAL RESOURCE BOOM AND ECONOMIC COMPETITIVENESS

The present study is part of a series of investigations undertaken by USAID's SPEED program to help Mozambique's private sector and government policymakers anticipate the potential impacts of the country's natural resource boom on the Mozambican economy.

Work on this topic was initiated by SPEED under the direction of Dr. Tyler Biggs, who explored the effects of currency value fluctuations (2011) and, more specifically, the risks of a possible "natural resource curse" (2012) on the Mozambican economy. Such a curse has been documented in many countries around the globe, both so-called developed and emerging, in the wake of rapid extractive industry expansion (Humphreys et al. 2007; Collier 2010; Shaffer and Ziyadov 2012). SPEED followed on Dr. Biggs' work with an overview of the range of potential impacts of a resource boom on economic competitiveness (Webber 2013). A more detailed overview of the natural resource boom in Mozambique, the so-called "Dutch disease" that may emerge from such a boom, and other countries' experiences with Dutch Disease is available in SPEED's report on potential impacts of the boom on labor markets in Mozambique (Salinger and Ennis 2014a).

Three value-chain studies are also being conducted of traditional, "tradables" sectors. These are sectors of the economy that produce goods either for export or to substitute for imports and whose international prices are set not by Mozambican producers but rather in global markets. The three value chains include agriculture (presented here), tourism (study launched in June 2014), and manufacturing (forthcoming, October 2014)². These are not value-chain studies per se. Rather, they take as their starting point the natural resource boom in Mozambique and then explore the range of potential economic impacts of the macroeconomic and relative price responses on the value-chains as they exist today and as they might evolve in response to the boom.

The challenge, in a nutshell, is the following scenario, referred to broadly as Dutch Disease because it was first observed in the Netherlands when natural gas exports sharply expanded:

- Exchange rate effects. Sharply rising inflows of foreign exchange from expanding natural resource exports will likely increase demand for the domestic currency. This can lead to strengthening of its market value, relative to foreign currencies.

As the market value of the currency appreciates, world prices are converted into domestic prices of goods, services, and imported inputs at a stronger exchange rate. This exchange rate effect will reduce the domestic price of outputs and tradable inputs. For example, the current exchange rate of the metical to the dollar is around 30 metical/dollar. If the metical were to strengthen by as much as 50 percent, to 20 metical/dollar³, a world price of 500 dollars, when converted into meticals equivalent, would "fall" from 15,000 to 10,000 meticals. Thus the domestic prices of imported products and inputs, as well as exports, will decline.

- Relative price impacts. With currency appreciation and increased revenues, both public and private, may translate into increased domestic spending. The effects of such increased spending – whether by government to build more roads or schools, hire more health care workers or teachers, or spend on many other priorities, or by the private sector to build more factories, offices, housing, or hire more workers – will likely be increased price pressure on so-called "non-tradables" sectors, i.e., on wages, real estate, construction, transportation, etc. As domestic prices rise, relative to price shifts in partner countries, the real effective exchange rate will also appreciate.

² Each of these reports will be posted to SPEED's website, when available; see www.speed-program.com.

³ Although the literature is full of Dutch Disease experiences, empirical observations of market or real exchange rate appreciation per se are less common, although instances of real exchange rate appreciation of 30-40 percent have been recorded. Ebrahim-zadeh notes a real appreciation of nearly 40 percent in Colombia, due to soaring coffee prices in the mid 1970s (2003). Oil revenues in the central African CFA zone led to appreciations of around 30 percent (Treviño 2011).

As the relative prices of tradables to non-tradables falls, demand and supply shifts within each sector may be induced. In many countries experiencing Dutch Disease, the expanding extractives industries and non-tradables sectors crowd out the traditional tradables sectors. Angola and Nigeria are just two examples of economies whose agricultural and industrial sectors have shrunk as oil exports have expanded.

The immediate exchange rate and relative price effects may set in motion a set of economic consequences, summarized below. The validity of these hypotheses is being probed through interviews with a variety of key stakeholders in each of the potential impact studies.

- **Labor market impacts.** Skilled labor may move into the extractives and non-tradables sectors (construction, infrastructure, real estate, etc.) and out of traditional, tradables sectors. With the lower prices of imported inputs, producers may substitute imported inputs for domestic factors (e.g., may increase use of imported equipment in place of more expensive skilled labor). As (some) wages rise, especially those of scarce, skilled workers, and (some) employment shifts, some labor market impacts may be anticipated. For example, agriculture, tourism, and/or manufacturing enterprises may lay off or may not be able to hire a full complement of workers in the face of skilled labor wage pressures. On the other hand, lack of appropriate skills will likely constrain the ability of rural labor to migrate in search of employment in the extractives sector. However, increased spending on labor-intensive, low-skill projects such as infrastructure development may provide off-farm employment opportunities for labor, with possible repercussions for labor supply in agriculture.
- **Non-tradables sectors impacts.** As growth in the non-tradables sectors – construction, infrastructure, real estate, etc. – expands, downstream impacts may be felt in agriculture, tourism, and manufacturing. There could be positive impacts, for example, as growth of infrastructure development could improve market linkages for agricultural or manufacturing producers.
- **Market impacts.** As incentives shift in favor of domestic markets, agriculture, tourism, and manufacturing may undertake shifts in terms of targeted markets for their goods. For example, the tourism industry might shift away from international luxury tourism into tourism aimed at local business men and women or manufacturing might turn away from exports and seek to deliver a different product mix into a less exchange rate-sensitive segment of the domestic market.
- **Consumption impacts.** As domestic prices of imported goods fall, impacts may be felt in terms of total calories consumed, composition of the food consumption basket, or nutritional outcomes. For example, lower metical prices of imported foods – while competing with domestic food producers – could help poor households afford more food, more diverse foods, and/or more nutritious foods. These impacts may, in turn, improve overall food security.
- **Innovation impacts.** As profitability margins are squeezed, innovation responses may be induced in each sector. For example: In the case of the labor market, “innovation” may mean upskilling of the workforce through training, especially in vocational trades; in agriculture “innovation” may mean investments in new techniques (and higher productivity), new products, new brands, new markets developed; in tourism “innovation” may mean development of new tourism streams, packages, products; in manufacturing “innovation” may mean investment in new forms of value-added processing to capture more value-added locally and thus improve productivity (e.g., export furniture, not wood).

- **Gender impacts.** As the above impacts unfold, men and women may be affected differently, either at the level of labor markets or within each of the sectors. For example, with regard to labor markets women may be affected by men migrating away from home in search of new jobs. This may decrease the availability of household labor, thereby increasing the burden of household work for women. On the other hand, it may also improve empowerment of women, if they in fact benefit from increased control and decision-making. Women may also face increased demand for sex workers in/around mining areas, and thus increased health risks. Since the majority of farmers in Mozambique are women, they may be negatively affected by declining profitability of smallholder agriculture. Men may benefit from increased job opportunities in the mining sector, but then they may face increased risks of hardship labor in construction, mining, etc., with possible adverse working conditions.
- **Institutional impacts.** As natural resource export revenues into Mozambique increase, pressures may be felt on Mozambican economic and political institutions for more transparent economic management (business environment). For example, as awareness mounts of natural resource-related resource inflows, Mozambicans may demand broader inclusion to benefit from the resource boom. Lack of responsiveness to these increased demands may increase social tensions.
- **Induced demand impact.** As incentives shift to favor extractives and non-tradables sectors, public and private investment needs may be identified that could mitigate the impacts of shrinking profitability. For example, investment in roads to promote market linkages or training to improve skills can raise productivity and thus raise returns per hectare or labor-day. Thus, despite likely profitability pressure in terms of unit costs and net revenues per unit, raising overall productivity would help to raise total net revenues to offset the per-unit profitability squeeze.
- **“Boom” perception impact.** As the natural resource boom magnifies and Mozambique’s strong growth is felt more widely, this might change the way Mozambique is viewed from outside the country. Such changing external perceptions might, in turn, affect global demand for Mozambican goods and services. For example, widening perceptions of Mozambique as a dynamic, growing, inclusive economy could attract new attention from international tourism consumers for different ways of engaging in Mozambique, e.g., nature tourism, historical tourism, village-level tourism,... On the other hand, if the natural resource boom is mismanaged, widening perceptions of Mozambique as an increasingly fractious, corrupt economy, may dissuade investors, tourists, and other consumers of Mozambican goods and services.

The ways in which these effects may take root will likely vary in each sector. Thus the purpose of SPEED’s natural resource boom potential impact studies is to probe weaknesses, challenges, and opportunities that the boom might induce on the part of value-chain producers, processors, traders, wholesalers, service providers, etc. Each of the studies will be a unique, stand-alone product. At the end of the study cycle, they will be presented as an integrated set of studies.

Although this study does not present detailed value-chain analyses for the five sectors under consideration, the elements of market dynamics, full value-addition, business environment, value-chain relationships, and new opportunities for value-addition are each taken into account here.

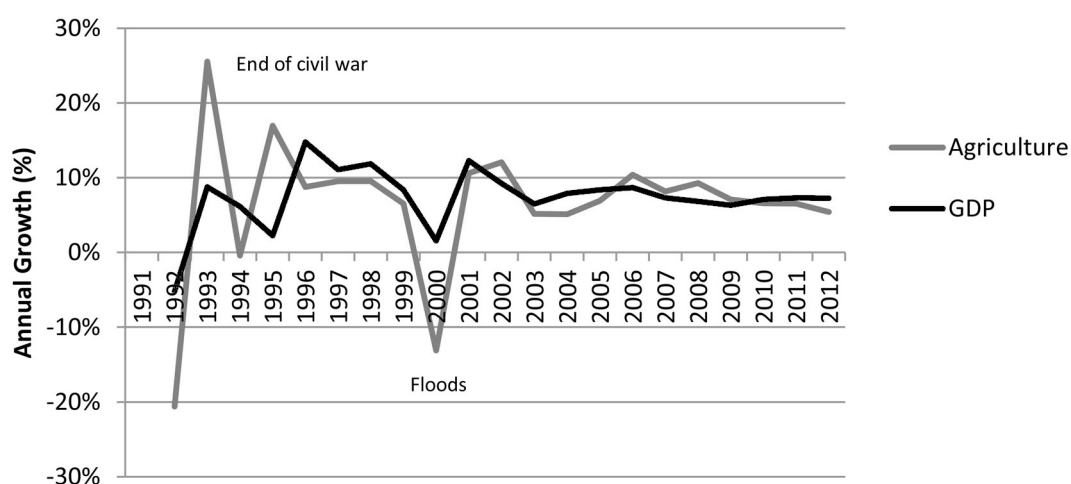
In the following sections of this report, we explore the role of agriculture in the Mozambican economy (Section 2), the methodology used for this study (Section 3), potential impacts of the natural resource boom on five agricultural value chains (Section 4), and offer some concluding thoughts and recommendations (Section 5).

2. OVERVIEW OF MOZAMBIQUE'S AGRICULTURAL SECTOR

Agriculture's contribution to the Mozambican economy has been extensively analyzed elsewhere. Agriculture remains an important contributor to the country's economy and to the livelihoods of four-fifths of Mozambicans, and an important potential contributor to future economic growth, if wise management of impacts of natural resource boom is in place.

Since the early 1990s agricultural sector growth has progressed in tandem with the country's economy recovery and growth. After a strong upturn following 16 years of civil war, agricultural output grew by an average of 8 percent per year, compared with growth of Mozambique's Gross Domestic Product (GDP), which has averaged an annual rate of growth for the same period of 9 percent (Figure 1).

FIGURE 1: AGRICULTURAL PERFORMANCE, 1992-2012



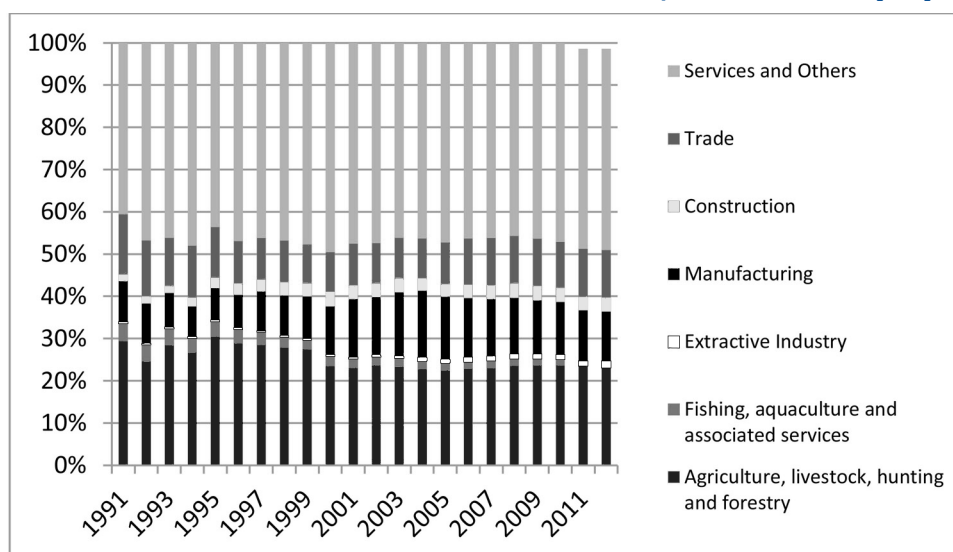
Source: National Institute of Statistics (INE)

While Mozambique's recent growth story is largely due to the emergence of so-called "megaprojects" (large investments to generate electricity and process imported alumina into aluminum) and the newly emerging and fast-growing extractive industries (coal, natural gas, and other minerals), it is of paramount importance that Mozambique's future growth story not be limited to these industries, if the benefits of growth are to be broadly shared.

Over the last twenty years, agriculture's share of GDP has averaged 25 percent (Figure 2). Until 2011, the contribution to GDP of the extractive industry was less than 2 percent; with the recent discoveries of gas, oil, and coal the Mozambican economic landscape will change and the share of extractive industries in the economy will rise. The IMF estimates that the share of coal and liquefied natural gas (LNG) sectors will rise to about 20 percent of GDP by 2023 (IMF 2013). The challenge for national policy makers is to implement policies that provide the right incentives for a competitive agriculture in the context of a strong, resource-driven economy.

⁴ See, for example, the Strategic Plan for Agricultural Development (PEDSA) prepared by the Ministry of Agriculture (2010), as well as the agro-livestock census of 2009-2010 (INE 2011), a multistakeholder action plan for agriculture (Monitor Group 2012) and a report exploring the use of improved inputs in Mozambican agriculture (Cunguara et al. 2013).

FIGURE 2: GDP COMPOSITION BY SECTOR, 1991-2012 (%)



Source: National Institute of Statistics (INE)

As Table 1 and Figure 3 below illustrate, agricultural exports are an important contributor to the country's exports. Despite expansion of megaprojects' exports, agricultural exports have maintained their share of total merchandise exports over the last seven years⁵. New agricultural exports, such as bananas, sesame, chili peppers, and other non-traditional agricultural exports, are emerging and developing fast. This development is in the context of growth rates of the country's exports by nearly 60 percent between 2008 and 2013.

Mozambique's major export trade partners have been changing over the last decade, with exports to Asian markets representing 23 percent of total exports in 2013, compared with 5 percent in 2005. This is in contrast with declining export shares to Europe, from 65 to 38 percent in 2005 and 2013, respectively. Exports to the Africa region experienced relatively modest growth, from 22 to 25 percent in the same period⁶.

TABLE 1: MOZAMBIQUE'S MAJOR EXPORTS (MILLION DOLLARS)

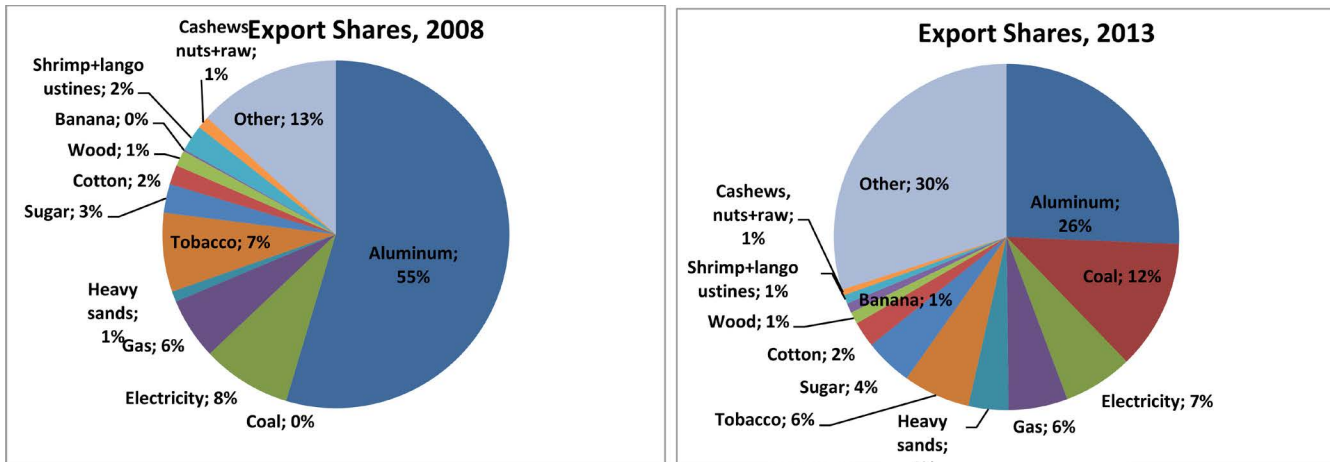
	2008	2009	2010	2011	2012	2013
Aluminum	1451.8	867.7	1159.6	1357.1	1091.7	1063.2
Coal	0.0	0.0	0.0	21.2	435.2	502.9
Electricity	221.2	274.4	276.5	299.5	233.4	270.1
Gas	152.0	123.3	133.8	162.1	175.1	229.6
Heavy sands	26.0	45.3	98.1	175.4	238.1	154.6
Gold	5.8	6.6	0.7	0.2	0.2	0.4
Tobacco	195.0	180.6	152.6	179.5	238.2	259.9
Sugar	71.3	58.3	87.5	87.9	154.4	185.7
Cotton	48.0	26.5	29.1	38.7	49.2	99.3
Wood	38.9	38.1	65.6	125.6	176.8	46.6
Banana	4.5	4.5	12.2	169.7	27.0	37.7
Shrimp, langoustines	65.1	57.1	46.1	42.8	30.1	33.9
Cashews (raw & nuts)	30.2	28.5	25.7	82.0	19.3	22.5
Miscellaneous	60.4	14.0	30.9	65.2	44.6	69.9
Other	287.3	426.8	227.0	311.4	942.2	1170.2
TOTAL, FOB	2657.5	2151.7	2345.4	3118.3	3855.5	4146.5
Of which, In Percentages						
Agricultural	17%	18%	18%	23%	18%	17%
Bananas, as % Agricultural	1%	1%	3%	23%	4%	5%
Cotton, as % Agricultural	11%	7%	7%	5%	7%	14%
Energy, minerals	70%	61%	71%	65%	56%	54%
Miscellaneous, other	13%	20%	11%	12%	26%	30%

Source: Banco de Moçambique. Balança de Pagamentos 2013

⁵ Note the rising share of the "other" exports category, suggesting that further disaggregation into discrete categories by INE would be useful.

⁶ Banco de Moçambique (2009 and 2013).

FIGURE 3: MOZAMBIQUE EXPORTS, 2008 AND 2013



Source: Banco de Moçambique. *Balança de Pagamentos 2013*

These shifts are also reflected in agricultural exports. For example, in 2012/13 almost 80 percent of cotton lint exports were sold into Asian markets (Malaysia, China, and Indonesia), while in 2004 Portugal, South Africa, Indonesia, and Bangladesh were equally important lint markets. South Africa is the country of destination today for Mozambican bananas, accounting for more than 75 percent of total banana exports; other markets include Botswana, Swaziland, East Europe, Saudi Arabia, and United Arab Emirates ⁷. Mozambique also imports milled rice mainly from Asian suppliers, such as Thailand, Pakistan, Vietnam, and India.

Mozambican agriculture occupies a very small space in global value chains. Local agricultural activity occurs at the primary level (farm-level production), with some subsectors (e.g., tobacco, sugar, cotton, seafood, and some timber) providing added value from agro-processing. Mozambique mostly exports unprocessed or primary processing level agriculture products (such as cotton lint, cashew nuts).

The predominance of low input-low yield systems, coupled with poor infrastructure limiting access to markets, contributes to the current limited state of agro-industry in Mozambique. According to the 2010 Agricultural Census, more than 95 percent of Mozambique's production takes place on smallholder farms, of which three-quarters occupy an average area ranging from 0.5 to 3 hectares. Mozambique's 2007 Green Revolution Strategy focused support on the transformation from subsistence into commercial agriculture (PEDSA, p. 1), such as emerging or advanced farmers who grow cotton and soy. The Commercial Agriculture Promotion Center (CEPAGRI) was established in 2009.

On average, the use of improved agricultural inputs, such as fertilizers and pesticides, is very low in Mozambique. Only 3 percent of small and medium farms use such inorganic fertilizers and 6 percent pesticides (especially those growing industrial crops such as tobacco and cotton), whereas the use of improved seeds by maize farmers is estimated at 9 percent (from Mozambique's Integrated Agriculture Survey 2012, cited in Mouzinho et al. 2014). The use of animal traction and mechanization is also negligible.

These technological challenges, coupled with inadequate agricultural practices, render very low agriculture productivity, critical to attain a competitive agricultural sector. For example, cereals yields in Mozambique are estimated to be one-quarter to one-third of the levels enjoyed in neighboring Zambia and Malawi (700 kg per hectare in Mozambique versus 2.1-2.7 tons per hectare nearby) (Mouzinho et al. 2014). Such national averages, however, mask some interesting variation by province. For example, 34 percent of farmers in Tete use inorganic fertilizers and 30 percent of farmers in Manhiça use improved maize seeds. While the Tete story is directly related to tobacco cultivation, it appears that indirect benefits are applicable to other commodities: 40 percent of farmers using fertilizers also apply them to their maize and sweet potatoes.

⁷ Republic of South Africa, Department of Agriculture, 2012 and calculations based on UN COMTRADE statistics until January, 2013.

3. VALUE CHAINS: STRUCTURE, COST DRIVERS, AND POTENTIAL IMPACTS OF DUTCH DISEASE

As discussed in Section 1, the profitability of agricultural commodity value chains is determined by a range of variables, e.g., costs, field- and processing-level productivity, efficiency of logistics, value addition, product quality, etc. In the analyses here, costs of production, processing, and marketing are compared with prices to assess profitability and highlight points along the value chains where particular constraints or challenges are posed. Discussions of value chain production and marketing characteristics, cost drivers, and profitability analyses are below.

The value chains targeted by this study were selected with the CTA agriculture working group, based on a combination of factors. This sample includes both export crops (bananas, cotton) and import-substitution crops (rice, tomatoes, soybeans), all but one of which are part of Mozambicans' diets, directly or indirectly. Soybeans have recently been introduced into Mozambique as an input into integrated poultry farming operations in Mozambique. Selected agricultural production statistics for those crops are below.

TABLE 2: AGRICULTURAL PRODUCTION STATISTICS, SELECTED CROPS, 2012

Food Crops			Cash Crops		
	'000 tons	'000 dollars		'000 tons	'000 dollars
Cassava	10,051	1,050	Bananas	470	132
Beans	282	138	Cotton lint	88	126
Pulses	235	123	Sugar cane	3,394	111
Maize	1,177	92	Tomatoes	250	92
Paddy rice	280	73	Tobacco	54	87
Sweet potatoes	900	68	Sesame seed	117	78
			Cashew nut	65	57
			Soybeans	18*	N/A

Notes: Beans and pulses would normally be combined, but are presented separately by FAOSTAT.

** 2010 estimate from Opperman and Varia (2011) for the Southern Africa Trade Hub*

Source: Food & Agriculture Organization, FAOSTAT, accessed August 20, 2014

Value chains were also chosen according to the current performance of the value chain and its future potential in the country's economy and its impact on food security, aligned with the government strategy and the millennium challenge goals (Monitor Group 2012). All are grown by smallholders either for self-consumption or cash income, although emerging or commercial farms are also involved in the production of bananas, cotton, and soybeans as cash crops

Mozambique's natural resource boom's biggest potential threat to traditional sectors of the economy will be through impacts on the value of the currency, the metical, and thus on prices of tradables (both products and tradable inputs) as well as on the prices of non-tradables, such as labor, land, and goods and services produced and consumed in the local market without parallel from the international market. As hypothesized earlier, a strengthened metical may make it hard for food crops to be produced profitably.

3.1. DATA COLLECTION AND ANALYSIS

An investigation checklist was developed to guide the team's understanding of the following variables: input markets: use of land, machinery and non-mechanical tools, improved inputs, labor; costs of production per hectare: financial prices of factors and inputs, taxes or subsidies that affect those prices; product markets: market options for sale of products, prices received, competitors; role of foreign investors in the value chains; ex-farm processing: value-chain structure, costs of processing; and key legal and regulatory framework challenges and overall business environment.

Cost structures were analyzed using simple, partial equilibrium worksheets in order to assess financial (or private) and economic (or social) profitability, at relevant points in each value chain. Analyses are crop-specific and do not take into account farming systems, complementarities or conflicts between or among various crops in terms of growing seasons, labor requirements, intercropping potential, etc. All costs are estimated on a per-hectare basis, whether actually produced on 0.5 or 4 hectares by the farmer.

Financial profitability is estimated from the farmer's perspective, reflecting actual costs incurred. Family labor, in such a scenario, is not costed, but net returns per day of family labor can be estimated. The cost of other inputs, such as land, may also be omitted in the financial analysis, if no financial outlay for land is incurred. The price used to value production is the price received by the farmer upon sale of the commodity. Prices paid by the farmer may also incorporate taxes (making the financial price higher) or subsidies (reducing the financial price to farmers).

The economic analysis assigns estimates of opportunity costs to both land and labor inputs. Where relevant, taxes and/or subsidies that may raise or lower prices actually paid by the farmer are eliminated. The economic analysis also values output using international parity prices, adjusted to Mozambican wholesale (for import-substitution crops) or the Mozambican border (FOB, for export crops) levels by adding or subtracting appropriate margins.

Economic and financial profitability ratios have been estimated. A cost-benefit ratio less than 1.0 indicates that returns to the crop's production exceed costs, i.e., the value chain is profitable, whereas a ratio greater than 1.0 indicates that costs exceed returns, i.e., the value chain is not profitable. Sensitivity analyses test alternative exchange rate and innovation (yield) scenarios.

3.2. REFERENCE MARKETS

All five value chains of interest are tradable commodities. We thus use international reference prices to benchmark the economic values of production, as explained below, converted into meticals at the prevailing market exchange rate with the dollar (30 metical/dollar).

Domestic prices in Mozambique may differ from international prices. A commodity may be a virtual non-tradable (for example, cassava); even domestic maize may be a virtual non-tradable. Prices within Mozambique of basic food grains may not be well integrated, given the size and poor status of transport and storage infrastructure. Quality differences that make domestic production distinct from the properly dried, consistent grain that can be imported from outside. Thus, prices in port cities may be significantly different than prices up-country (even for a traded commodity such as maize). Recent analysis of maize prices across Tanzania, for example, found that domestic factors, such as weather, seasonality, and – in particular – export bans, affect price levels and variability to a far greater extent than world prices (World Bank 2014a), reflecting limited storage and transport infrastructure (similar to conditions in Mozambique).

Nevertheless, regional and international market prices represent the economic benchmark of value of agricultural commodity production. In some cases, adjustments may need to be made to the international reference price to account for domestic varieties or qualities produced. For example, cotton lint from Mozambique may sell at a discount relative to the international reference price because of shorter staple length or higher degrees of impurities per bale. Or, Mozambique's imported milled rice may contain a higher rate of broken grains, thereby requiring downward adjustment of the international reference price. And so forth.

TABLE 3: WORLD REFERENCE PRICES, EXPECTED 2014 AND 2020

Commodity	Parity	Reference Market	Unit	Expected, 2014	Expected, 2020
Bananas	FOB	South Africa	dollar/kg	<i>N/a</i>	<i>N/a</i>
		Europe	dollar/kg	0.95	0.93
Cotton	FOB	Asia	dollar/kg	2.00	2.17
Rice	CIF	Thailand, 5 percent	dollar/metric ton	410	392
		Thailand, 25 percent	dollar/metric ton	390	
		Vietnam, 5 percent	dollar/metric ton		
Soybeans	CIF	Europe	dollar/metric ton	550	522
Tomatoes	CIF	South Africa	metical/kg		

Source: World Bank Commodity Prices, South Africa Wholesale Prices

Our analysis took as its references the following markets; adjustments were made to prices to bring them to Mozambique shores and convert them into meticals⁸. The initial analysis presented here uses expected 2014 prices.

3.3. BANANAS

Bananas have traditionally been part of the basket of staple foods grown and consumed in Mozambique, particularly in the Central region. Bananas, traditionally produced by smallholder farmers, account for nearly half of all fruits consumed in Mozambique, according to the FAO's 2011 food balance sheet.

Mozambique enjoys very good conditions to grow bananas on a commercial basis, currently produced in Maputo, Manica, and Nampula provinces. Commercial plantation output is targeted for export in Maputo and Nampula; plantations in Manica have great potential, but the quality of bananas needs improvements and critical mass to qualify for export to the biggest markets. Despite optimal growing conditions, bananas are also experiencing challenges that hinder competitiveness in international markets, including the Asian fruit fly infestation, the threat of Panama disease, and logistics costs to reach the international markets.

The commercial cultivation of bananas was launched in Mozambique over the last decade, attracting South African and Mozambican investments in the form of joint ventures or partnerships in medium and large companies. This transformation has established bananas as a high-value, cash crop. Across the country, fifteen medium to large commercial plantations are in operation, the two largest being Matanuska (in Nampula) and Banalandia (in Maputo), along with a conglomerate of companies operating in the South, including Beluzi Bananas, Lda (an organic banana operation), Rio Verde, and AAA Enterprises.

Investors in Mozambique's banana industry have been expressing their interest to expand production areas. However, investments have been put on hold, due in part to concerns over high logistics costs (scanners, dry port and other inefficiencies)⁹ that hamper the competitiveness of Mozambican bananas in international markets. Plant pathology challenges also hinder further development of banana production. Evidence of Panama disease (Fusarium wilt) has been reported on the farm of Matanuska, the same disease that threatens global production of Cavendish bananas (Gondolini 2014; Koeppel 2014)¹⁰. In Manica, exports are limited both by the small scale of production and the fruit fly, whose appearance has caused a ban on Manica bananas in Maputo and South Africa markets. Donors and local governments have been investing and are implementing several programs to strengthen the banana value chain (Dalberg 2013). One example is the fruit fly lab that was inaugurated in the last semester in Manica province.

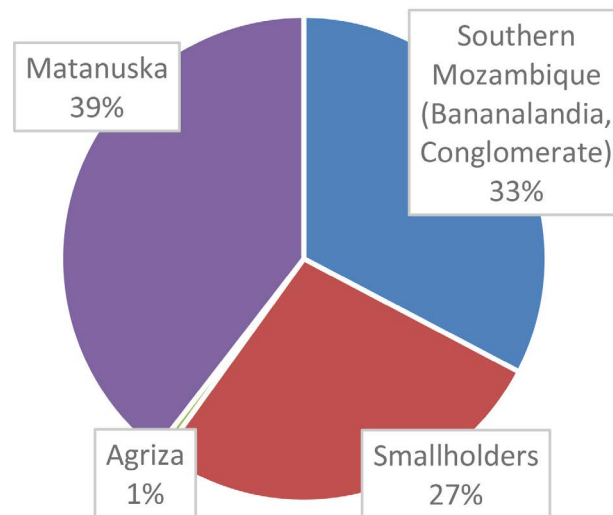
⁸ All but the tomato price are sourced from the World Bank's commodity market prospects webpage.

⁹ For further information, see Murithi et al. (2012).

¹⁰ According to May and June 2014 reports on www.freshfruitportal.com, an international task force, including the University of Stellenbosch, the Southern African Development Community, the International Institute for Tropical Agriculture, USAID, and the Bill and Melinda Gates Foundation, are drafting a "continental action plan." See "Mozambique Panama Disease talks to yield containment report," May 30, 2014, <http://www.freshfruitportal.com/2014/05/30/mozambique-panama-disease-talks-to-yield-containment-report/?country=mozambique>, and "African taskforce reveals plans for Panama Disease TR4 fight," June 18, 2014, <http://www.freshfruitportal.com/2014/06/18/african-taskforce-reveals-plans-for-panama-disease-tr4-fight/?country=mozambique>. The Food and Agriculture Organization of the United Nations (FAO) also oversees the World Banana Forum, with a special section on Fusarium wilt (<http://www.fao.org/economic/worldbananaforum/wfb-aboutus/en/>).

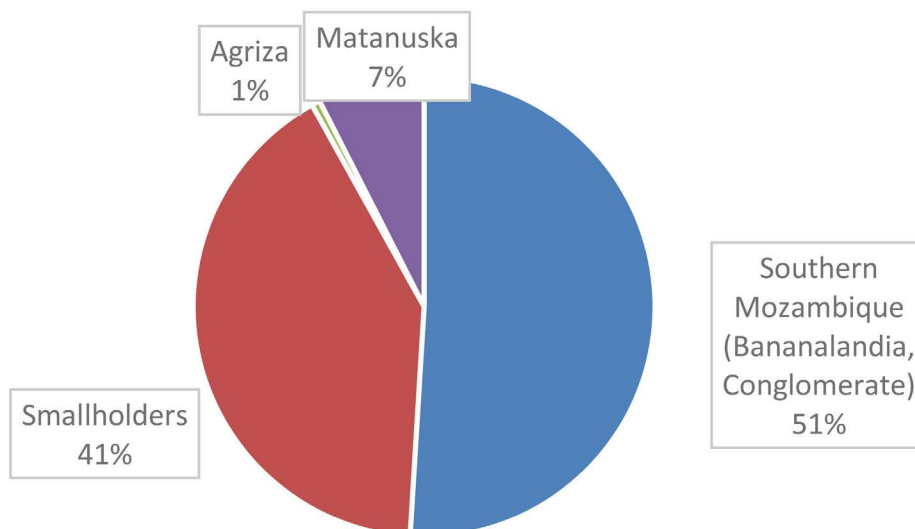
The graphs below illustrate the distribution of banana production areas and production volumes across the country. While areas are fairly evenly distributed among Matanuska, the Southern plantations, and smallholders, smallholders are still estimated to supply over 40 percent of total production, although their production lacks quality for exports and suffers fruit fly issues that prevent production from being sold in Southern Mozambique. Smallholder production is thus confined to domestic consumption. By far the largest share of production comes from plantations in Southern Mozambique, producing for export to South Africa.

Figure 4: Distribution of banana areas (% ha)



Source: TechnoServe (2013)

FIGURE 5: DISTRIBUTION OF BANANA PRODUCTION (% TONS)



Source: TechnoServe (2013)

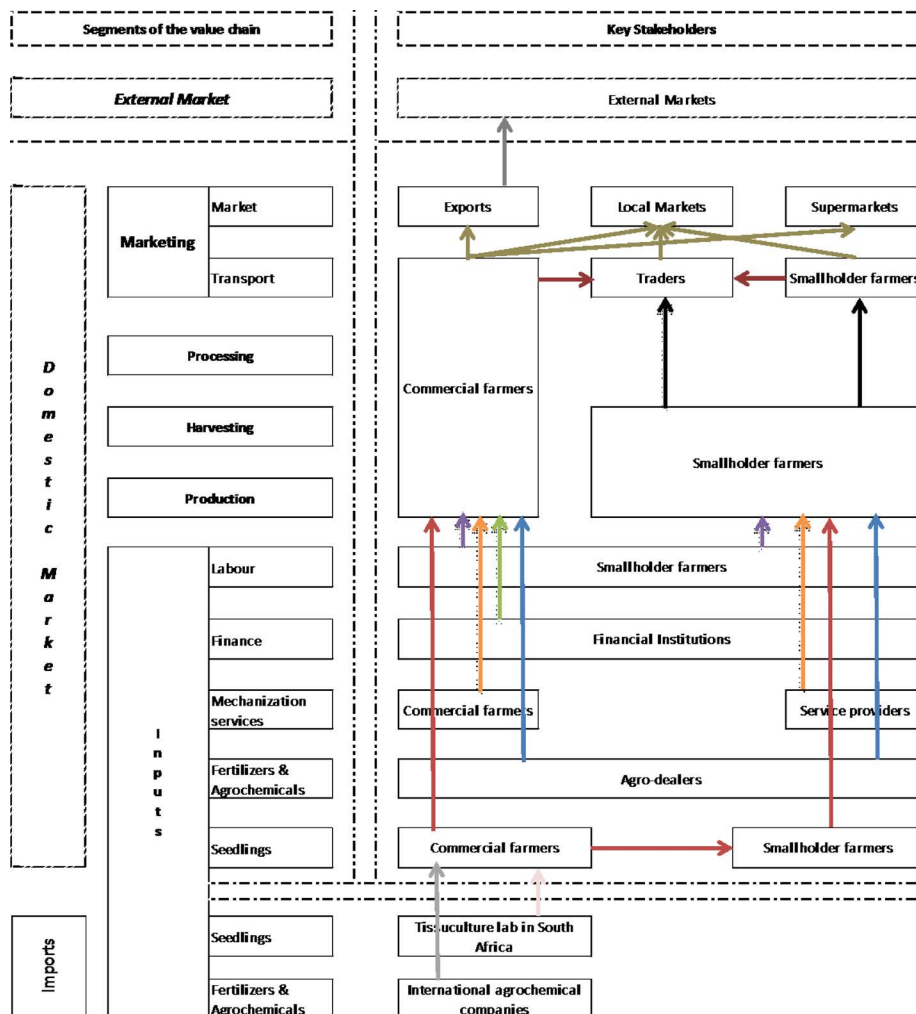
PRODUCTION

Mozambique produces bananas in three main systems: (1) large-scale plantations, over 1,000 ha, using high tech irrigation systems, high input and high skilled management, and producing a high quality of bananas; (2) medium-scale plantations, areas approximately 100 ha and not exceeding 500 ha, use of irrigation systems, use of inputs, in some cases use of outgrower schemes (Manica) and good quality product; and (3) smallholder production, very small areas located around the house, with very low/no management, no use of modern inputs or irrigation, no attention to specific varieties, producing bananas of low yields and relatively poor quality.

Large- and medium-scale banana plantations were initiated with planting material supplied by Del Roi Laboratories in South Africa and moved to own-production of seedlings for expansion of production areas. Varieties used and proved commercially competitive are Williams, Grand-Nain, and Dwarf Cavendish. Other purchased inputs for banana production are supplied by local firms or directly sourced in South Africa and other international input markets.

Banana yields at the medium and large plantations range from 36-40 tons/ha initially, increasing to 52 tons/ha with maturity. Commercial banana production is highly labor-intensive, relying mostly on seasonal labor. Mechanization is used for land preparation and phytosanitary treatments. Management challenges include both managing the hired labor force and maintaining amicable relations with neighboring populations, to mitigate potential losses due to farm invasions and thefts. The banana value chain is outlined in Figure 6 and further described below.

FIGURE 6: BANANA VALUE CHAIN FLOWCHART



Source: Study Team Analysis

PROCESSING

Banana harvesting is done manually, with fresh fruit bunches placed in a conveyor system that moves unprocessed bananas from the plantation to the packing houses. At the packing houses, the bunches are processed into fingers, sorted by quality, weighed and washed in a water tank, wrapped with an inner polyethylene cover, packed in 18-kilogram, perforated boxes and then into 12-meter refrigerated containers, taken directly to a truck, and transported to the port (in the Center) or the border and on to South Africa (in the South), by local hired trucks.

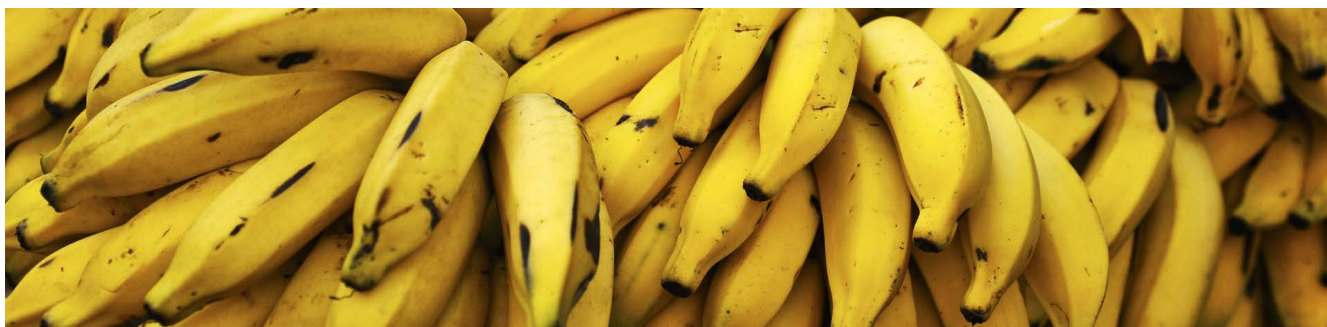
BANANA MARKETS AND TRADE

Approximately 85 percent of domestic production is consumed locally and the remaining 15 percent is exported by the commercial banana subsector. In the domestic market, especially in Maputo City, bananas are sold mainly through wholesalers' depots, established by Bananalândia. Retailers are supplied by the depots and sell in the local markets. Push carts are also a common form of bringing bananas to the final consumer.

Global banana exports in 2012 were about 16.5 million tons, of which nearly four-fifths was supplied by Latin America and the Caribbean region, 5 percent by African suppliers (especially Côte d'Ivoire and Cameroon), and the rest by Asia (especially from the Philippines, with 2.7 million tons) (FAO 2014). Over 85,000 metric tons of bananas (0.5 percent global market share) are exported from Mozambique to East Europe, Middle East, South Africa (with small re-exports on to Botswana and Swaziland), Zimbabwe, and Zambia (see below for volume trends and rough destination breakdowns). In Manica smallholder banana production was established before 1975 for domestic consumption and to supply Zimbabwe and Zambia. Banana production in Southern Mozambique, particularly in the Incomati River Valley, Marracuene, and Manhiça is targeted for the South African market.

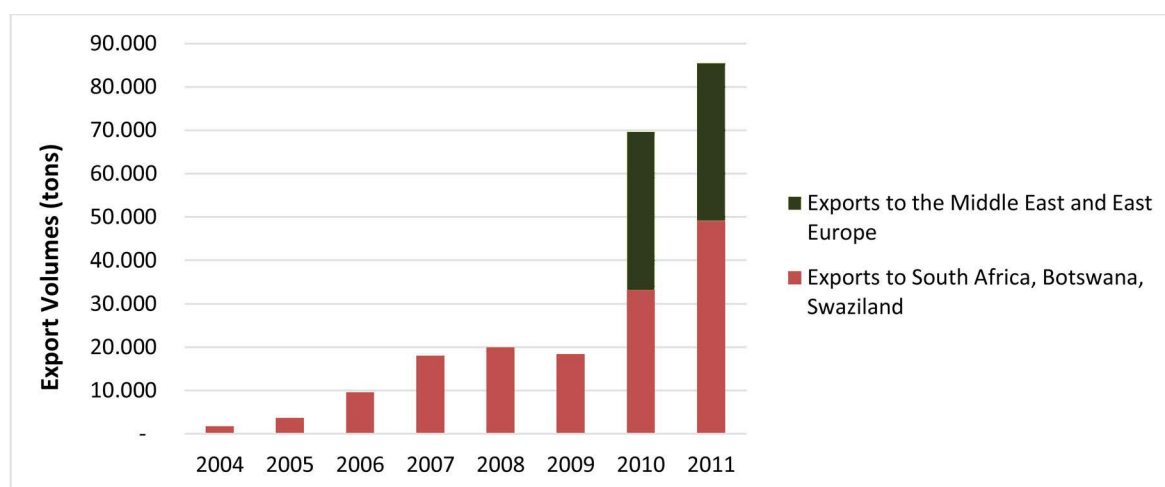
Statistics for Mozambican exports of banana are not readily available. The study team acquired information from different sources and interviews with value-chain stakeholders. The graph below was compiled with information from interview, showing exports of Mozambican banana, where major contribution comes from the companies in the Southern Mozambique and Matanuska in Nampula.

Mozambique used to import bananas from South Africa during the 1980s/90s (Republic of South Africa 2011). More recently, however, Mozambique has become a major and consistent exporter of bananas to South Africa. Mozambique's climate offers opportunities to supply bananas into South Africa, especially during the cold season when South African production is minimal ¹¹. In 2010 South Africa imported 36,685 Million Tons of bananas from SADC countries, of which over 90 percent (33,217 Million Tons) from Mozambique, far exceeding the 9 percent supplied by Zimbabwe. Regional trade of bananas benefits from the SADC preferential tariff of zero duty in both Mozambique and South Africa. Middle East and Eastern Europe markets are serviced from Northern Mozambique. Annual exports to these regions are estimated at 36,452 tons/year.



¹¹ One 2012 South African news report tells of South African farmers "jumping ship" to grow bananas in Mozambique: "South African banana farmers are under threat of competition from their peers in Mozambique as the neighboring country can produce the commodity more cheaply." See N. Davids Times article, May 15, 2012, <http://www.timeslive.co.za/local/2012/05/15/sa-banana-farmers-jump-ship>. Panama disease has also plagued South African banana production in the past (Viljoen 2002).

FIGURE 7: BANANA EXPORTS FROM MOZAMBIQUE, 2004-2011



Notes: Matanuska and Jacaranda export from Northern Mozambique to the Middle East and East Europe, while plantations from Namaacha and Boane in Maputo export to South Africa. Exports from the North were estimated based on the following: Jacaranda exports 2000 boxes/18Kgs per week and Matanuska exports 665 tons/week. Some re-exports from SA to neighboring countries occur.

Source: Stakeholders interviews 2014, SA Department of Agriculture 2011

COST STRUCTURE AND DRIVERS

This analysis of profitability of the banana value chain is based on a business plan for a banana plantation in Central Mozambique, provided by AgDevCo¹². Costs are estimated for two segments, namely farm-level (production, harvesting, and packing, 73 percent of total cost) and post-plantation (transport, marketing, and trade logistics, 27 percent of total cost). Tradable inputs (fertilizers, pesticides, and packaging materials) are sourced from outside Mozambique. Fixed costs include qualified labor for management and technical support, as well as security, operating costs, and contingencies. In this value chain, since all labor is hired by the plantation, the adjustments from financial to economic cost are small: 600 meticals are added to cover the cost of a hectare of land, and small adjustments are made for fuel subsidies included in the cost of mechanized operations. Marketing costs carry the bananas through to port and on to an assumed final destination in Europe¹³.

Assuming yields of 40 tons per hectare and valuing bananas at the 2014 CIF price in Europe [0.95 dollars per kilogram, per World Bank (2014b)], the value chain is profitable under current circumstances, in both the financial and economic scenarios, with a cost-benefit ratio of 0.40. In the longer run, the World Bank expects the nominal world price to remain steady (declining, therefore, in real terms).

The downstream, post-plantation segment of costs is driven by transport to port, trade facilitation, and shipping costs. Transport, marketing, and trade costs could be reduced by investing in logistics infrastructures and management efficiency. These downstream costs comprise nearly 30 percent of total value-chain cost, confirming reports that highlight the role of high logistics costs, which render uncompetitive many exports from Nacala and Beira ports, especially for agricultural value chains (Murithi et al. 2012).

¹² A U.K.-registered "social impact investor and agribusiness project developer."

¹³ An alternative model that carries Mozambican bananas to a wholesale market in South Africa would also be useful for comparison, but accurate transport and logistics costs could not be obtained. The reference prices in the two markets are significantly different. Whereas the 2014 CIF price in Europe is 0.95 dollars per kilogram (World Bank commodity prices), the wholesale price in Johannesburg in June 2014 was 3.92 Rand per kilogram (0.37 dollars per kilogram), according to Joburgmarket.co.za.

TABLE 4: COST & PROFITABILITY ESTIMATES: PLANTATION BANANAS

Cost Summary		Unit	Financial	Economic
Farm-level	Land, labor, water	metical/ha	89,670	90,470
	Tradable inputs	metical /ha	42,120	42,120
	<i>Subtotal</i>	metical /ha	131,790	132,590
Packaging	Labor	metical /ha	74,250	74,250
	Inputs	metical /ha	74,250	74,250
	<i>Subtotal</i>	metical /ha	148,500	148,500
Fixed	Management	metical /ha	51,300	51,300
	<i>Subtotal</i>	metical /ha	331,590	332,390
	/ Yield (40 Tons/ha)	metical /ton	8,290	8,310
	Transport, port, shipping	metical /ton	3,046	3,046
TOTAL	CIF	metical /ton	11,336	11,356

Profitability Analysis			Financial	Economic
Ex-Plantation level, CIF South Africa *				
Gross revenue		metical /ton		
Costs		metical /ton		
Net revenue		metical /ton		
Cost-benefit ratio				
Ex-Plantation level, CIF Europe				
Gross revenue		metical /ton	28,500	28,500
Costs		metical /ton	11,336	11,356
Net revenue		metical /ton	17,164	17,144
Cost-benefit ratio			0.40	0.40

** Could not be completed.*

Sources: AgDevCo, Study Team Analysis

POTENTIAL IMPACTS OF DUTCH DISEASE

Sharply rising inflows of foreign exchange from natural resource export sales can lead to strengthening of the value of the local currency, relative to foreign currencies. The immediate “exchange rate effect” is appreciation of the currency, which may set in motion a set of economic consequences. How might this impact the banana value chain? Table 5 shows shifts in profitability in line with likely impacts of Dutch disease.

Exchange rate effect: If we assume metical appreciation from the current USD exchange rate of 30 metical/dollar to 20 metical/dollar, this would result in the lowering of both the reference price of bananas and the costs of imported fertilizers and pesticides. As tradable inputs become relatively cheaper, it improves profitability. Unit economic profitability declines from 17,144 meticals per ton to 9,026 meticals per ton, but still remains strongly positive.

Innovation effects: If yields are improved at the farm level, from the current 40 to at least 52 tons per hectare, the effect of this productivity increase would be to counteract the impact of the stronger metical. In a “full-innovation + logistics improvement” scenario that combines higher yields and expanded production areas, thereby increasing the critical mass of volumes available for export, and increased pressure on port authorities to improve logistics efficiency, the banana value chain is likely to become even more competitive.

Table 5: Impacts of exchange rate & yield changes on banana profitability

Profitability Analysis			Financial	Economic
Exchange Rate = 20 metical/dollar				
Gross revenue		metical/ton	19,000	19,000
Costs		metical /ton	9,158	9,974
Net revenue		metical /ton	9,842	9,026
Cost-benefit ratio			0.48	0.52
Exchange Rate = 20 metical/dollar & Yield = 52 T/HA				
Gross revenue		metical /ton	19,000	19,000
Costs		metical /ton	7,563	8,375
Net revenue		metical /ton	11,437	10,625
Cost-benefit ratio			0.40	0.44

Source: Study Team Analysis

3.4. COTTON

Cotton is Mozambique's third most important agricultural source of foreign exchange earnings (in 2013 cotton lint exports represented 14 percent of total agricultural exports and 2 percent of total exports) and an important source of cash income for many families in rural Mozambique. Even with the sizable megaprojects-related exports, cotton is amongst the top ten exports of Mozambique, in 2013 cotton export earnings reached nearly 100 million dollars.

Mozambique's seed cotton and lint production in 2012 was its highest level since 2004, 173,000 tons and 66,000 tons, respectively (IAM 2014). With just over 6 percent of farms producing seed cotton in 2012, according to the Integrated Agricultural Survey, the greatest concentrations of farmers involved in the value chain are found in the north and center, especially Cabo Delgado (20.5 percent) and Nampula and Sofala (10.5 percent of farmers, each) provinces.

Comparative data for 2013/14 presented by USDA suggest that Mozambique's total production of 44,000 Million Tons puts it in the middle of the list of African producers, led by Burkina Faso (261,000 Million Tons), Mali (205,000 Million Tons), and Côte d'Ivoire (163,000 Million Tons). In the aggregate, African producers account for about 6 percent of global lint production in 2013/14. Comparative yields from leading producers in Africa and globally are presented in Table 6, suggesting that Mozambique's current levels of productivity (discussed further below) compare quite favorably.

Table 6: Comparative seed cotton yields

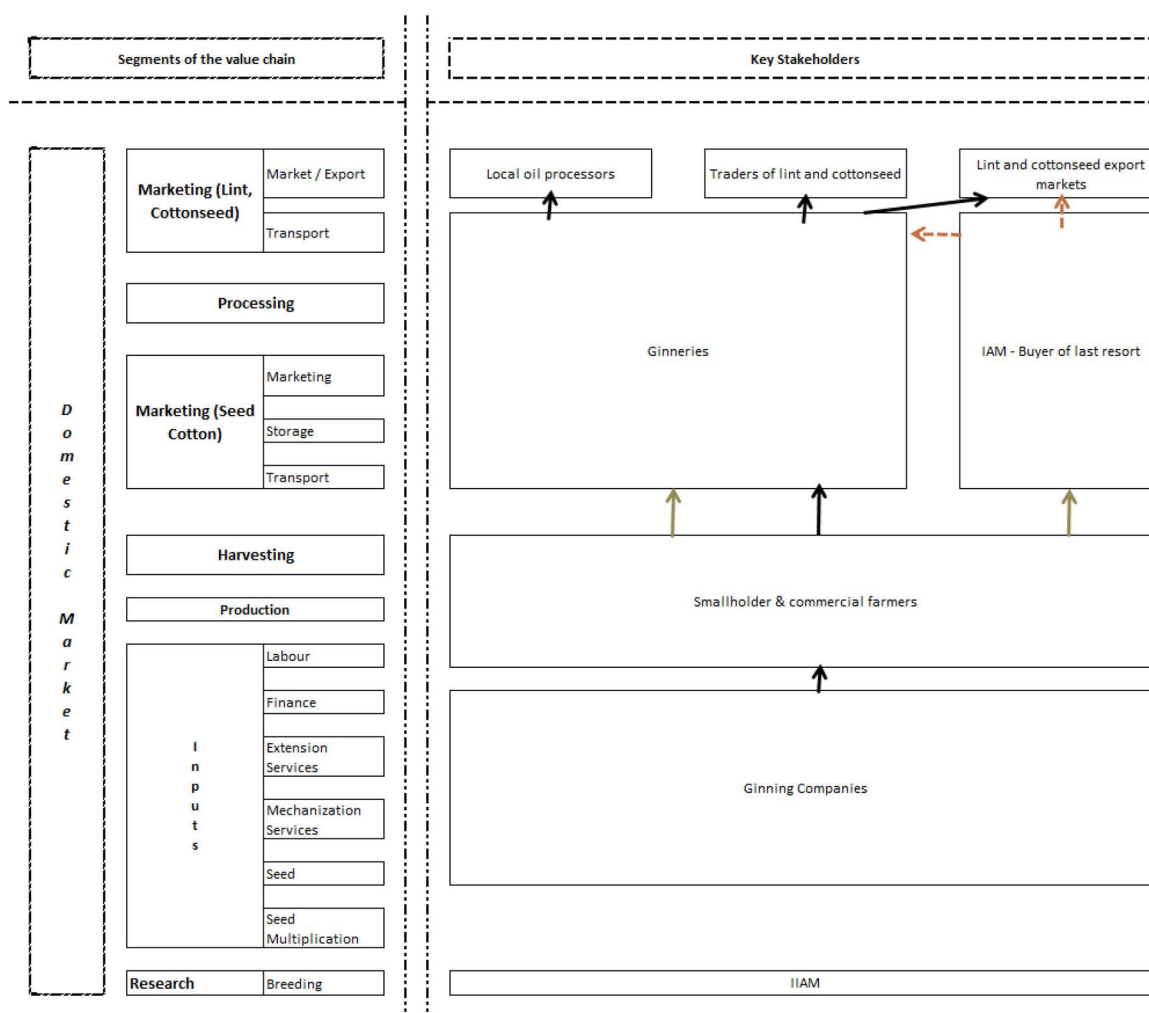
Africa	Yield, 2012/13 (Kg/ha)	Other	Yield, 2012/13 (Kg/ha)
Burkina Faso	471	China	1422
Mali	386	India	549
Côte d'Ivoire	460	United States	921
Cameroon	495	Pakistan	689
Benin	403	Brazil	1484
Egypt	729	Uzbekistan	703
Zimbabwe	284	Australia	2006

Source: USDA (2014a)

Mozambique’s cotton value chain is summarized in Figure 8. Seed cotton is a labor-intensive crop, often requiring access to both family and hired labor. The main production areas are in the north; Nampula, Cabo Delgado, Tete, Niassa, and Zambezia provinces account for 84 percent of total production (IAM 2014 and INE 2013). Seed cotton is grown as a rainfed crop in Mozambique, produced by about 250 thousand farmers, mostly by smallholders cultivating on average 0.5 ha with seed cotton yields of 600-700 kg per hectare ¹⁴.

Mozambique’s cotton sector is organized according to a system of concessions granted by government to private ginning companies, based on a contract agreement between the latter and the state, represented by the Mozambique Cotton Institute (IAM). The contract stipulates concessionaires’ clear rights and obligations and sole marketing responsibility (they have monopsony buying power) over a given concession area. Ginning companies are responsible for promoting seed cotton production under contract farming arrangements with individual smallholders, providing inputs and agricultural services to producers, purchasing seed cotton harvested by producers, ginning, and exporting cotton lint and cottonseed.

FIGURE 8: COTTON VALUE CHAIN FLOWCHART



Source: Study Team Analysis

IAM was established in 1991 to support and supervise activities related to the production, marketing, processing, and export of cotton. IAM works closely with ginning companies and public research institutions to promote an efficient and competitive cotton industry. It also plays the role of buyer of last resort, if farmers are unable to sell to the ginning concessionaire in their district. For its various services, IAM assesses a 2.5 percent fee on exports.

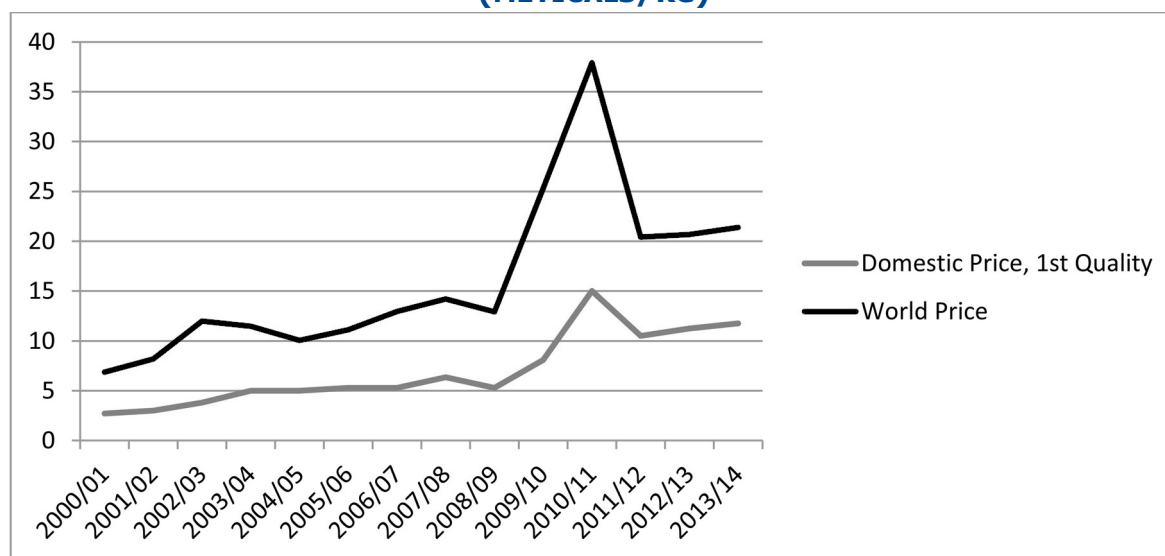
¹⁴ This represents a significant improvement over yields of 120-180 kg per hectare presented in FAO (2012).

Two seed cotton producer prices are set annually by the government, negotiated among IAM, the Cotton Association representing ginners, and producers in each cotton production cycle. An indicative price is set before sowing begins (in October/ November), and an official minimum price is fixed just before the harvest begins (in April/May). The formula (below) for setting the minimum producer price takes into account the world price ¹⁵, the estimated cost of insurance and freight between Mozambique and importers, a quality differential (depending on whether first or second quality lint is exported), transaction fees, the exchange rate, the ginning ratio (percentage lint extracted per unit of seed cotton), net value of seed after deducting 12 percent of total seed ginned to be returned to farmers for next year's planting, and the negotiated share to producers on export income, ranging from 50-55 percent (FAO 2012). Ginning companies may offer prices that exceed these minima.

$$\text{Minimum Producer Price} = \{ [(\text{World Price} - (\text{Insurance, Freight, Quality Differential, Transaction Fees})) * \text{Exchange Rate}] * \text{Ginning Ratio} + \text{Net Seed Value} \} * \text{Negotiated Producer Share}$$

Mozambique's minimum producer price for first-quality seed cotton has tracked international prices over time, as seen in Figure 9. Since 2011/2, the domestic price received by producers is about half of the world price equivalent ¹⁶.

FIGURE 9: DOMESTIC & WORLD COTTON PRICES, SEED COTTON EQUIVALENT (METICALS/KG)



Note: The world price shown here is a seed cotton equivalent price, equal to the average world CIF lint price from the second year of each campaign, adjusted from CIF to FOB by an assumed 5 percent price reduction, multiplied by the average metical/ dollar exchange rate (World Development Indicators), and converted into seed cotton equivalent using an assumed, constant ginning ratio of 38 percent.

Source: Domestic prices, 1st quality from LAM website; World lint prices from World Bank historical commodity price series

Like all agriculture, cotton production is subject to weather and market risks (World Bank 2010). However, since the domestic price is directly linked to the international cotton price, and since an indicative price is set seven months before the commercial season begins (presumably to give farmers adequate information to weigh whether to plant cotton; a final price is announced in April just as harvesting and purchasing gets underway), the ginning companies face significant price and exchange rate risks, depending on how international prices and currency markets trend in the months of the commercial campaign following the April announcement of the official price.

¹⁵ Average price over the previous six months, according to one ginning representative.

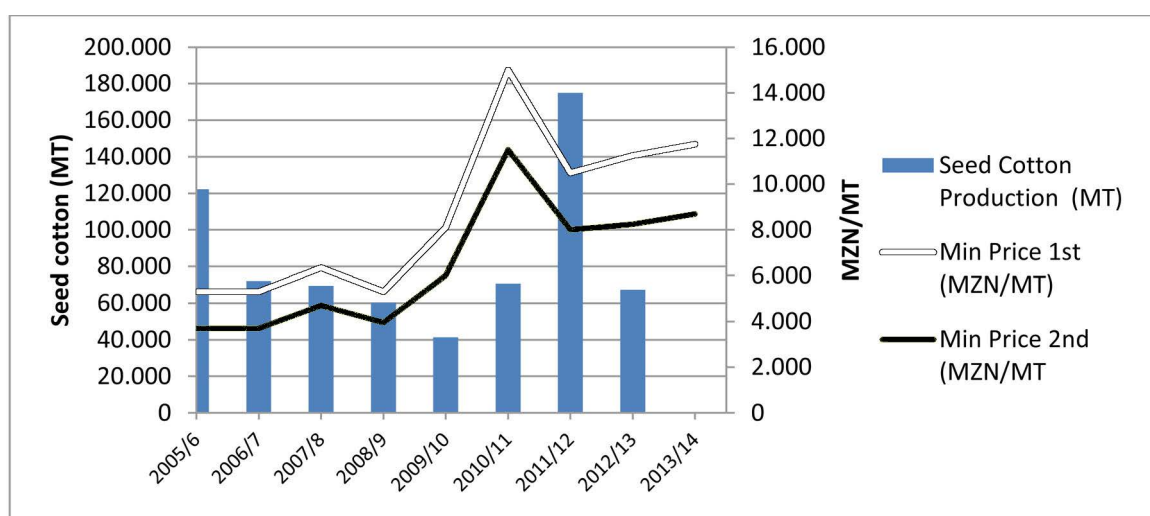
¹⁶ In August 2014 Mozambique's news agency reported that seed cotton had been confiscated from Mozambicans attempting to sell into Zimbabwe from Manhiça province (AIM 2014). The 2014 producer price in Zimbabwe is between 40 and 50 cents (US) per kilogram, depending on grade (Zimbabwe Mail 2014), compared with 11.75 meticals (39 US cents) for top quality in Mozambique.

PRODUCTION

The production characteristics described here are related to a typical smallholder farmer with minimum use of inputs, no use of hired labor, getting low yield and operating under contract farming with ginning companies. Ginning companies supply seeds, chemicals, and extension services, purchase the harvest, and pay farmers.

The minimal use of improved inputs and the lack of varietal development for the seed supplied seem to be determinant factors for seed cotton yields (Grupo João Ferreira dos Santos (JFS)/ Cotton International Conference 2014). Seed cotton production exhibits large variability in response to farmgate price changes, as shown in Figure 10.

FIGURE 10: SEED COTTON PRODUCTION AND MINIMUM FARMGATE PRICES, 2005 -2014



Source: IAM 2014

PROCESSING, MARKETING, AND TRADE

Ginning companies purchase seed cotton from farmers and then process it. There are fifteen ginning companies in the country, with an installed processing capacity estimated at 260 000 Million Tons per year. Most ginning capacity is installed in northern and central regions of the country, in line with the areas of concentration of seed cotton production. Current ginning outturn is relatively low, averaging 38 percent¹⁷; cotton seed accounts for 61 percent of weight, and the remaining 2 percent is waste. Mozambique's relatively low ginning ratio is said to be due to quality issues (e.g., dirty cotton caused by poor picking techniques; use of mixed seed varieties; and cotton mixing when bulking, resulting in inconsistent fiber quality, per World Bank 2010, p. 6). The ginning byproduct cottonseed is either crushed locally to supply domestic cooking oil or exported to South Africa, while 12 percent of seed is redistributed to farmers for planting.

Volumes of lint exports vary greatly in line with world price changes. In the last ten years, average exports of lint amounted to 25,000 Million Tons with lowest at 8,948 MT (INE, UNCTAD statistics). For the 2013/14 campaign, IAM expects exports in excess of 40,000 tons. Whereas in earlier years, European markets were the most important destination for Mozambican lint, in 2012/13 almost 80 percent of lint exports were sent to Asia, with Malaysia and China accounting for over 50 percent of exports that year.

¹⁷ Tschirley et al.'s Table 11.4 reports the following ginning outturn ratios elsewhere in sub-Saharan Africa: Burkina Faso, 42 percent; Mali, 42 percent; Cameroon, 41 percent; Zimbabwe, 41 percent; Zambia, 40 percent; Tanzania, 36 percent; Uganda, 35 percent (Tschirley et al. 2009).

TABLE 7: COMPARISON OF MOZAMBIQUE FOB & WORLD COTTON LINT PRICES, 2003/4-2013/4

Campaign	Average FOB Price, Mozambique (dollar/T)	World Price (CIF dollar/kg) (Yr1)	World Price (CIF dollar/T) (Yr1-Yr2)	85% World Price (FOB equivalent)	Ratio of Mozambique/ World FOB Price
2003/4	1070	1.37	1382	1175	91%
2004/5	990	1.22	1291	1098	90%
2005/6	1010	1.27	1242	1055	96%
2006/7	1130	1.40	1331	1131	100%
2007/8	1410	1.57	1485	1262	112%
2008/9	1150	1.38	1478	1256	92%
2009/10	1700	2.28	1833	1558	109%
2010/11	2310	3.33	2806	2385	97%
2011/12	1540	1.97	2648	2251	68%
2012/13	1770	1.99	1980	1683	105%
2013/14	1500*	2.00	1996	1697	88%

Note: * Expected

Sources: LAM and World Bank Historical Commodity Prices

The FOB price of Mozambican cotton lint prices tracks world prices, albeit imperfectly (Table 7). In some years, the FOB price received by Mozambique appears to overshoot, then undershoot, the world price, averaged over two years and adjusted downward by 15 percent to account for the CIF-FOB differential. The average ratio of Mozambique's FOB price to the world price over the 2003/4-2013/14 period is 95 percent. This somewhat lower price is said to be due to the fact that Mozambique has historically been a very smaller player on the world market than other, more significant exporters (Table 8). Africa, overall, has accounted for about 11 percent of world lint exports, and Mozambique only about 2 percent of Africa's share. The World Bank suggests that Mozambican lint is of inferior quality due to a variety of factors: poor harvesting practices; use of mixed seed varieties; and cotton lint mixing by ginners (World Bank 2010), whereas Mozambican stakeholders suggest that the lower price received by Mozambican exporters is due to the lower volumes it sells.

TABLE 8: WORLD COTTON LINT EXPORTS, 2005 AND 2011 (TONS)

Region	2005	2011		2005	2011
World	8,807,502	8,198,818			
Africa	1,403,690	870,544			
Selected African Exporters					
Burkina Faso	194,600	158,793	Zambia	54,284	35,325
Zimbabwe	68,926	89,466	Tanzania	66,330	30,334
Mali	258,830	78,152	Mozambique	21,235	16,486
Côte d'Ivoire	129,304	70,169	Chad	45,034	14,995
Cameroon	116,396	55,803	Sudan (former)	81,064	7,442
Benin	161,271	52,298			

Source: FAOSTAT, FAO, accessed August 22, 2014

COST STRUCTURE AND DRIVERS

Information used for this analysis was drawn from IAM and complemented with information from smallholder farmers' interviews and meetings with a representative from the ginning companies.

When analyzed using a financial cost model, land, seed, and own-farm labor are costed at zero. Thus, financial seed cotton production is driven by the cost of purchased inputs (insecticides, sprayer and batteries, and protective materials). Although no hired labor is used in this traditional model, intensive use is made of family labor, which implies that the opportunity cost of labor is another cost driver of seed cotton production. Although one might expect some indirect resource boom effects through labor market impacts, as wages and opportunities arise and family labor today growing cotton seek opportunities in an expanding non-rural economy. However, according to Salinger and Ennis (2014a), it is not expected that the natural resource boom will put upward pressure on the wages of low-skilled, agricultural labor. Assessment of cotton profitability in economic prices uses the CIF price in Asia, adjusted back to Maputo, of 1.91 dollars per kilogram, whereas the financial analysis is done using IAM's expected FOB price for the 2013/14 campaign of 1.50 dollars per kilogram (IAM 2014).

Farm-level returns to own-labor are 59 meticals/day. This is well below the current minimum wage in agriculture of 3010 per month, or about 115 meticals per day. Of course, it would not be unusual for returns to family farm labor to be below the official minimum wage. In fact, 3010 meticals per month is about 100 dollars per month, which is 3-4 dollars per day, depending on the number of days worked per month¹⁸.

Downstream costs are assumed to be the same in both the financial and economic scenarios. In the economic profitability analysis, land is valued at 1,600 meticals per hectare and own-labor is valued at the prevailing market wages (not official minimum wages for the agriculture sector), varying from 30 to 175 meticals per day, depending on the task and the calendar.

Transportation costs from farm to gin and from gin to port and port charges are an important driver of ginning costs. Labor costs, both variable ginning labor and fixed labor costs, are also significant. The model also includes a fee of 2.5 percent charged by IAM on the FOB price for to promote the development of the cotton sector. Total ginning costs are in part offset by the value of the marketable (and exportable) by-products, cottonseed and cotton waste (linters), which are valued according to prices provided by IAM.

TABLE 9: COSTS & PROFITABILITY ESTIMATES: SMALLHOLDER COTTON

Cost Summary		Unit	Financial	Economic
Farm-level	Land	meticals/ha	0	1,600
	Purchased inputs	meticals/ha	1,202	1,287
	Labor	meticals/ha	100	5,115
	<i>Subtotal</i>	meticals/ha	1,302	8,002
	/ Yield (0.7 Tons/ha)	meticals/ton seed cotton	1,859	11,431
	/38 percent ginning ratio	meticals/ton cotton lint	4,893	30,081
Ginning, marketing, export	Labor	meticals/ton cotton lint	2,940	2,940
	Transport (farm-gin, gin-port), port charges	meticals/ton cotton lint	5,407	5,407
	Other (sacks, losses, packaging, energy, repairs, etc.)	meticals/ton cotton lint	4,590	4,590
	IAM charge	meticals/ton cotton lint	1,125	1,125
<i>Minus value of</i>	Cottonseed, waste	meticals/ton cotton lint	(5,689)	(5,689)
TOTAL	FOB	meticals/ton cotton lint	13,265	38,453

¹⁸ This is significantly higher than factory wages in Southeast Asia, suggesting imbalances. Factory minimum wages in Bangladesh were raised to 68 dollars per month in late 2013; in Cambodia, they are 100 dollars per month; in Vietnam, 100-128 dollars per month, depending on location; in China, minimum wages in the most industrial provinces of Shenzhen and Shanghai are over 1,800 yuan per month (almost 300 dollars) (<http://www.clb.org.hk/en/content/wages-china>). A report conducted by the US Worker Rights Consortium (2013) compared real wages (based on the legal minimum wage and other compensation normally received, but not overtime pay) of apparel workers in countries that supply the US clothing market. Their report found that wages in Peru, Guatemala, and Thailand exceeded those in China somewhat, with Bangladesh and Cambodia at the low end of the range. Arguably, since labor productivity is much higher in Asian industrial settings, the minimum wage for agriculture in Mozambique appears high, relative to these benchmarks. In Mozambique, workers who can find employment at the official minimum wage in agriculture are considered fortunate (Jones and Tarp 2012). However, access to salaried work is rare for rural workers, most commonly held by young men who migrate for some or all of a season (Ali 2013).

TABLE 9: COSTS & PROFITABILITY ESTIMATES: SMALLHOLDER COTTON

Profitability Analysis		Financial	Economic	
Farmgate				
Gross revenue		meticals/ton seed cotton	11,750	
Costs		meticals/ton seed cotton	1,859	
Net revenue		meticals/ton seed cotton	9,891	
Cost-benefit ratio			0.16	
Return to family labor		meticals/day own-labor	59	
FOB				
Gross revenue		meticals/ton cotton lint	45,000	57,305
Costs		meticals/ton cotton lint	13,265	38,453
Net revenue		meticals/ton cotton lint	31,735	18,852
Cost-benefit ratio			0.29	0.67

Source: JFS, Study Team Analysis

Financial profitability is positive, with a financial cost-benefit ratio of 0.16 at farm level and an economic cost-benefit ratio of 0.67 ex-ginnery.

POTENTIAL IMPACTS OF DUTCH DISEASE

Exchange rate effect: What would be the impact if the metical appreciates from 30 metical/dollar to 20 metical/dollar on the cotton industry? A strong appreciation of metical would lead to a lower value of lint exports, set in dollars in Asia and expressed in meticals at Mozambique's border. The cotton industry becomes borderline non competitive, based on its economic cost-benefit ratio of 1.01.

Innovation effect: If, however, seed cotton yields were to rise to 1.5 tons per hectare, economic profitability would be restored.

TABLE 10: IMPACTS OF DUTCH DISEASE ON COTTON PROFITABILITY

Profitability Analysis			Financial (Farmgate)	Economic (Ex-Gin)
Exchange Rate = 20 metical/dollar				
Gross revenue		metical/ton	7,833	38,204
Costs		metical/ton	1,341	38,608
Net revenue		metical/ton	6,493	(405)
Cost-benefit ratio			0.17	1.01
Return to family labor		metical/day	39	
Exchange Rate = 20 metical/dollar & Yield = 1 T/HA				
Gross revenue		metical/ton	7,833	38,204
Costs		metical/ton	938	29,993
Net revenue		metical/ton	6,895	8,210
Cost-benefit ratio			0.12	0.79

Source: Study Team Analysis

3.5. RICE

Mozambique has a 500-year tradition of rice cultivation, according to the International Rice Research Institute. Rice plays an important role in the diet of the Mozambican population, contributing about a quarter of all cereals calories consumed¹⁹, and is a source of cash income. Mozambique is either the fourth (measured in total consumption) or third largest (when measured in per capita terms) consumer of rice in Southern Africa (Table 11).

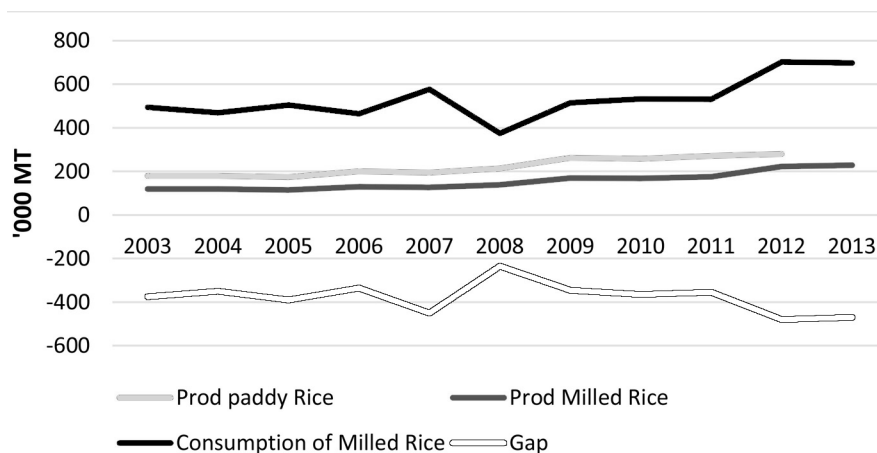
TABLE 11: RICE CONSUMPTION IN SOUTHERN AFRICA

Country	TOTAL CONSUMPTION - MILLED RICE ('000 tons)			PER CAPITA CONSUMPTION - MILLED RICE (Kg per Capita)		
	2010	2011	2012	2010	2011	2012
Madagascar	3202	2902	2810	151.9	133.9	126.0
Tanzania	1030	1090	1100	22.9	23.5	23.0
South Africa	700	850	900	13.8	16.5	17.2
Mozambique	533	551	582	22.2	22.4	23.1
Angola	266	322	335	13.6	16.0	16.1
Congo, DR	317	317	317	5.1	5.0	4.8
Malawi	78	79	91	5.2	5.1	5.7
Mauritius	65	55	70	50.7	42.8	54.2
Zambia	40	40	41	3.0	2.9	2.9
Swaziland	3	3	3	2.5	2.5	2.4

Note: Data not available for Lesotho, Namibia, Seychelles, or Zimbabwe.

Source: IRRI World Rice Statistics, accessed August 21, 2014

FIGURE 11: RICE PRODUCTION AND CONSUMPTION IN MOZAMBIQUE, 2003-2013



Source: Index Mundi, sourced from USDA and confirmed with IRRI statistics

Despite favorable agro-ecological conditions, the country depends on imports for two-thirds of total consumption. In 2012 milled rice imports reached about 480,000 Million Tons, domestic production of milled rice was 222,000 Million Tons. Figure 11 illustrates the milled rice balance (market size) in the last 10 years.

¹⁹ According to the FAO 2011 food balance sheet for Mozambique. Maize contributes half of all cereals calories consumed.

PRODUCTION CHARACTERISTICS

Mozambique's potential for rice production is an estimated area of 900,000 hectares, of which an estimated 300,000 hectares are currently used for paddy production, according to the FAO. About 60 percent of this is cultivated under lowland wet conditions, the remainder under upland dry (Kajisa and Payongayong 2011). With only minor strategic support to improve productivity and convert rice cultivation into a cash and (potentially) export crop, current production is unable to satisfy total domestic demand, estimated at 700,000 tons of milled rice, of which between 450 and 500,000 tons are imported annually (USDA 2014b).

Today, considerable initiatives are underway to raise rice production through expanded area and increased yields in Zambézia, Nampula, Sofala, Gaza and Maputo; with major irrigations investments in Zambézia and Gaza provinces. Intergovernmental cooperation with China has led to new developments in the Chokwé and Xai-Xai irrigation perimeters of Gaza province. A chart of the value chain is presented in Figure 12.

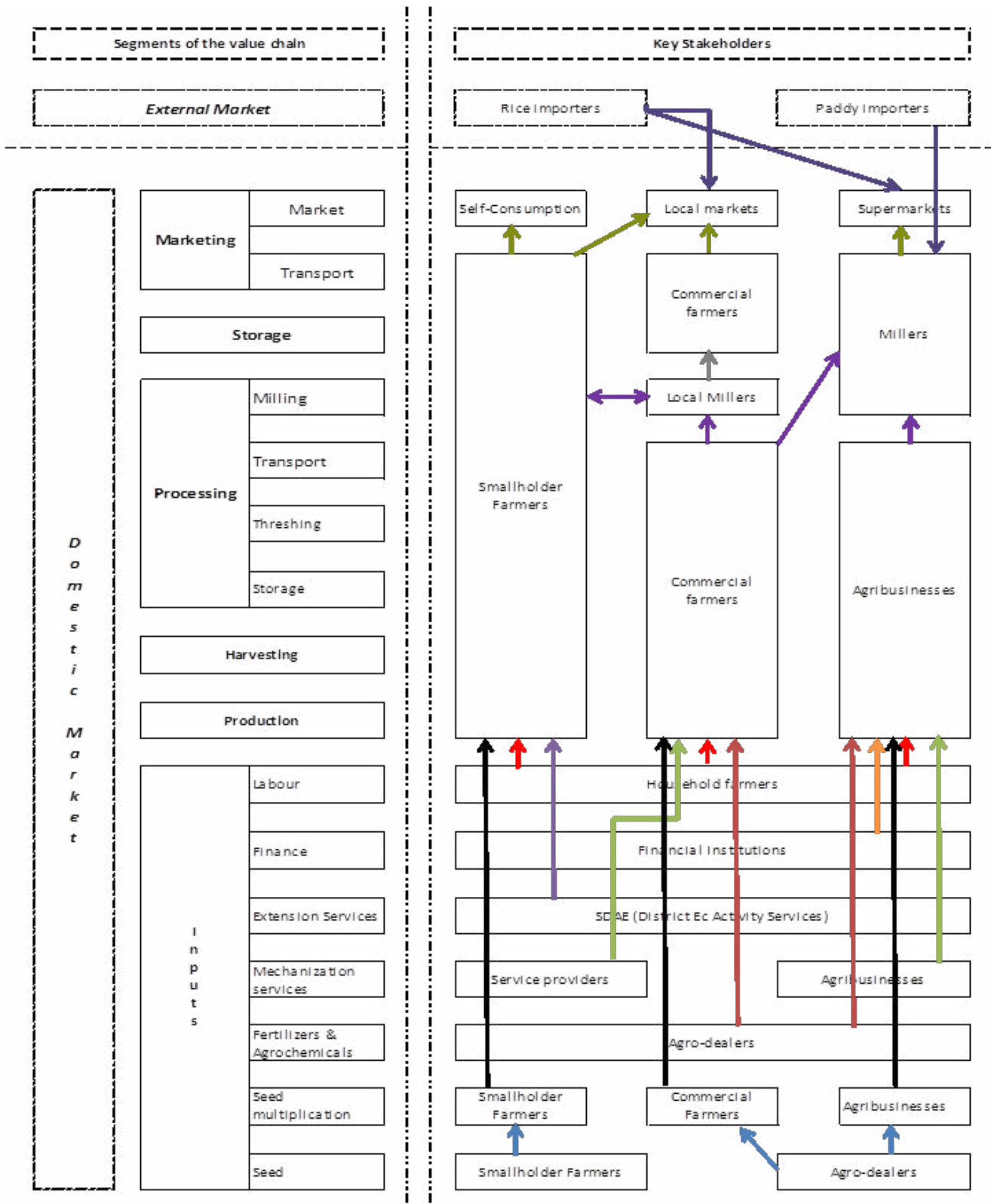
Current rice production in Mozambique is on traditional, smallholder-based systems on areas ranging between from 0.5-1hectare. Yields are low, ranging from 0.5-2.5 tons per hectare, although the top 20 percent of farmers in Gaza province's Chokwé perimeter attain 4 tons per hectare (Kajisa and Payongayong 2011, 619). Chokwé perimeter was developed during colonial times, had fallen into disrepair, was severely damaged by flooding within the last ten years, but is now receiving rehabilitation investments. One crop of rice is produced in Mozambique per year, but the irrigation authority in Xai-Xai (Regadio do Baixa Limpopo, RBL) hopes to move to two seasons per year in the near future.

Large-scale production is being experimented through a public-private partnership with a Chinese company, Wanbao Grain and Oil Investment Limited, in the Lower Limpopo region of Xai-Xai (and to some extent, in Chokwé). Wanbao's production technology currently yields about 5 tons per hectare with potential for 10 tons²⁰. The Chinese company currently offers a training program to teach their methods – involving leveling of land (by tractor) prior to seeding to enhance water utilization, use of pre-germinated seed, and transplanting of seedlings after germination as sowing gaps become evident – to local farmers on outgrower schemes. These innovations require discipline and a focus on results by farmers, especially in the first 40 days of the rice season to achieve the expected/indicated yields. Farmers are first trained on one hectare; after demonstrating mastery of techniques and commitment to the process, farmers are allowed to expand their operations to as much as four hectares. Other large-scale, commercial farming investments in rice production are being made by OLAM, a private, international agribusiness company, in Namacurra, Zambézia.



²⁰ Wanbao's work in Mozambique's rice sector attracted attention when accusations regarding Chinese motivations ("land grabs," "producing for export to China") were raised in the popular press and online. This, in turn, has brought researchers to nuance or dispel such claims; see D. Brautigam and S. Ekman, "Rumours and Realities of Chinese Agricultural Engagement in Mozambique," *African Affairs* 111 (2012): 483-492; A. Ganho, "'Friendship' Rice, Business, or 'Land-grabbing?'" *Land Deal Politics Initiative Working Paper 32* (May 2013); S. Chichava, "Xai-Xai Chinese rice farm and Mozambican internal political dynamics: A complex relation," *LSE IDEAS Africa Programme, Occasional Paper 2* (July 2013). While concerns over local land rights and government granting of use rights to foreign investors are an important issue, attention from local and international press, NGOs, civil society, etc. has politicized Chinese technical cooperation projects in Mozambique's irrigated perimeters at a time when access to promising, new technologies to raise food production productivity is sorely needed.

FIGURE 12: RICE VALUE CHAIN FLOWCHART



Source: Study Team Analysis

Farmers acquire certified seed from both public and private outlets. Rice producers typically use local, drought-tolerant seed varieties with production cycles of 5 to 6 months and yield potential of 2.5 ton/ha ²¹. Improved, shorter cycle, high-yielding varieties are not drought-tolerant and require fertilizers, with potential yields of 6 tons/ha ²². The Instituto de Investigação Agrária de Moçambique (IIAM) has released four rice seed varieties ²³, multiplied by Sementes de Moçambique (SEMOC) for the market. MozSeeds, a subsidiary of MozFoods, imported pre-basic seed from South Africa and India and conducted rice varieties research, resulting in the release of 7 varieties ²⁴, all found suitable for Chokwé and other agro-ecological zones in Mozambique. MozSeeds also does varieties maintenance of those released by IIAM. Until last year, MozSeeds produced certified seeds for the market. Demand for MozSeeds' seeds decreased substantially in the last year, particularly in Gaza, possibly due to the closure of Mozfer Industrias Alimentares (a rice producing subsidiary of MozFoods) in 2013 after the floods and subsequent distribution of seeds by Wanbao. Government approval of Wanbao's recommended seed varieties was granted on the basis of prior certification approved in Tanzania.

Rice production is heavily dependent on water availability. Both large and small irrigation perimeters are found in Mozambique. Production in Gaza province is carried out in large irrigation perimeters in Chokwé and Xai-Xai, both along the Limpopo River. These are managed by public institutions, namely the Hidráulica do Chokwé Empresa Publica (HICEP) and the Empresa Pública do Regadio de Baixo Limpopo (RBL). Differences between the two schemes govern access to irrigated land, which in turn influences the scale and efficient use of land. In Chokwé producers have acquired rights to the use of land (referred to by the Portuguese acronym, DUATs, for Direitos de Uso e Aproveitamento das Terras or rights of land use and exploitation) from the provincial government; for reasons that are unclear, this seems to result in idle irrigated land ²⁵. In contrast, smallholder producers in the Xai-Xai perimeter do not have DUATs, instead they use Contratos de Exploração (exploration contracts) granted by the RBL. This form of access to irrigated land, along with Wanbao's technical assistance, seems to result in higher rates of active land use and higher rice yields. It appears that change in work-culture, involving greater farmer discipline regarding land preparation and crop management, is key for better results. This merits further research. Access to water in Chokwé and Xai-Xai is for a flat fee of MZM 800 per hectare, regardless of the volume of water actually consumed.

In other rice producing provinces, small-scale irrigation, perimeters managed by water users' associations, predominate. There, users pay a utilization fee that covers infrastructure, water use, and management.

Rice cultivation is fairly labor-intensive, particularly at planting and pre-harvest stages. Guarding against predation by birds as the rice matures in the field is especially labor-consuming. Kajisa and Payongayong (2011) observed that labor constraints are an issue for rice cultivation in Mozambique, unlike in Asia where landless laborers are readily available for hire by rice farmers. Although exchange labor among farmers and paid labor by task both exist in Mozambique's rural sector, the authors maintain that labor supplies are insufficient for large-scale, Asian-style rice cultivation. Farmer interviews in Xai-Xai did not raise labor supply constraints as an issue, however. In addition to seeds, water, and labor, purchased inputs (e.g., fertilizers, pesticides, and land mechanization services) are used in rice production in Chokwé.

²¹ The most important local varieties are Chupa, Chibiça, Agulha, Faia, Mamima, Ndegue, and Muana muiangani.

²² In 2006 four improved varieties were available: c4-63, IR - 64, ITA-212, and ITA 312. In 2011 five new varieties adapted to the southern provinces (irrigated rice) were released: BR IRGA 409, BR IRGA 417, farox, BRS Alvorada, and Macassane.

²³ IITA 312, Limpopo, Macassane, and IGA.

²⁴ BR IGA 409, BR IGA 417, BR S Alvorada, Farox, Teotama, Moz 114, and Vazomate.

²⁵ A formal land rental market does not yet exist in Mozambique, although anecdotal evidence suggests that farmers in Chokwé hope to be compensated for their DUATs if foreign investors seek to produce on their land. For more information, see USAID (No date) and Bruce (2007).

MILLING

Although Mozambique's rice milling capacity is installed in several location of potential production, the supply of paddy is far below the existing processing capacity. Most of the rice produced by smallholders in Zambézia is processed at home, using either traditional processing methods or small household processing manual machines. In Gaza there two existing rice milling factories: one in Palmeiras, Inácio de Sousa, which sells milled rice in Maputo, the other in Xai-Xai, operated by Wanbao. HICEP is also building a new rice mill in Chokwé, scheduled to be complete in mid 2014. In Zambézia two milling companies operate: Empresa Orizícola da Zambézia (100 tons/day), property of the Federation of Associations of Zambézia in Nicoadala; the other is the Instituto de Cereais de Moçambique (ICM) (150 ton/day). New rice processing infrastructures have been established with government support in Limpopo and Zambeze Development Corridors.

A report on Mozambique's rice sector suggested that poor post-harvest practices (threshing, drying) and outdated installed rice milling capacity create suboptimal conditions for competitive rice milling in Mozambique (Agrifood Consulting 2005). Although Mozambique's average rice milling ratio is a respectable 67 percent²⁷, milled rice in Mozambique exhibits a fairly high degree of broken grains, comparable to the 15-25 percent broken rice exported by Thailand. Also according to Agrifood Consulting, the average cost of rice milling in Mozambique is five times higher than benchmark costs in Southeast Asia (54 dollars per ton versus 11 dollars per ton, in 2005), owing to several factors. Most mills in Mozambique are diesel-, rather than electricity-operated. Labor and handling costs are also much higher, due to higher wage rates and lower labor productivity in Mozambique. Thirdly, all other costs – packaging, transport, and other variable and fixed costs – are also significantly higher in Mozambique. Moreover, transport costs from mill to wholesale are higher in Mozambique, affecting value-chain costs for rice and all other commodities as well.

TRADE

Mozambique imports milled rice mainly from Thailand, Pakistan, Vietnam, and India. Larger importers include ADC (formed through the merge of Delta Trading with Africom), OLAM International, Phoenix Commodities, and DALIMA Trading, in addition to about twenty small traders/importers. Given the current market structure including the actual rice technology frontier it will require enormous investment in technology to achieve higher yields and production in scale to compete and progressively substitute imports.

COST STRUCTURE AND DRIVERS

The cost structure of the rice value chain is built from interviews held with HICEP, RBL, and the Provincial Directorate of Agriculture in Zambézia, smallholder farmers, milling companies, and traders/importers. Actual cost data used for a high-input, smallholder farm in Chokwé were provided by HICEP. The structure represents a typical, market-oriented smallholder farmer, using seed, chemicals, irrigation, mechanization, fertilizers, and mainly family labor²⁸.

In the financial analysis, the main cost drivers at farm level are associated with purchased inputs (46 percent of farm-level costs); mechanization (26 percent); and labor (24 percent of financial cost is hired labor), especially the costs associated with guarding against bird damage. The rental use of tractors in mechanized operations such as land preparation, planting, and harvesting drives the cost, due fuel consumption. Although a fuel subsidy exists for agricultural uses (and has been incorporated in the analysis), its access has been cumbersome.

²⁷ Agrifood Consulting Inc. reports much higher shares of milled rice obtained from small-scale mills, whereas larger mills are reported to produce 50 percent whole grain and 15 percent of fine, broken rice. The same report cites international best practices of 72-73 percent in Asia.

²⁸ In our financial analysis, costs reflect actual expenditures by farmers, with family labor valued at zero and financial returns estimated per day of family labor spent in cultivation. In our economic analysis, we apply opportunity costs to value all labor, whether hired in or contributed by the farm household.

Processing costs are derived from a detailed 2005 study of Mozambique's rice sector, including small-scale diesel, small-scale electric, and medium/large-scale milling costs (Agrifood Consulting 2005). These were averaged, and adjusted by Mozambican inflation to 2014 prices. Total milling costs are driven by labor (33 percent), capital costs (22 percent), fuel, maintenance, and electricity (19 percent), and fixed costs (17 percent). Milling costs also reflect the burden of underutilized capacity. Of the final cost of milled rice delivered to Maputo, farm level costs represent about 71 percent of total cost, ginning costs are 23 percent, and the rest is the cost of transport from mill to Maputo.

In the economic cost analysis, all labor inputs are valued, including family labor (initially valued at 75 meticals per day), bringing total labor costs to 30 percent of total farm-level production cost, in economic terms. If valued at 100 meticals per day, the official minimum wage, economic profitability decreases further.

A domestic financial price of 9 meticals/kg was used to value paddy at farmgate and 22.5 meticals/kg for a kilogram of milled rice in the Maputo wholesale market ²⁹. The price used to estimate economic profitability is based on the FOB price of 25 percent broken rice from Thailand (390 dollars per ton), adjusted to Maputo and converted into meticals. The net return at farmgate per day of family labor is about 75 meticals per day. However, when the value of family labor is included in the economic analysis (valued in the base case at 100 meticals per day, as per the official minimum wage for agriculture), rice cultivation is not profitable at the farm level, as indicated in Table 12.

Should this farmer achieve yields of 5 tons of paddy per hectare, however, the economic cost-benefit ratio becomes 0.88, i.e., the system is once again profitable (the breakeven yield is about 4.5 tons per hectare). At the wholesale level, milled rice is economically uncompetitive as well, given the significantly lower import parity price and the inclusion of all labor costs ³⁰. As at the farm level, a higher yield on-farm would improve the profitability of milled rice as well (however, the breakeven yield is much higher, inclusive of milling and transport costs: 7 tons of paddy per hectare would be required to achieve a cost-benefit ration of 0.98).

TABLE 12: COSTS & PROFITABILITY ESTIMATES: SMALLHOLDER RICE

Cost Summary		Unit	Financial	Economic
Farm-level	Land, water	meticals/ha	1,400	2,000
	Purchased inputs	meticals/ha	15,490	15,490
	Mechanization	meticals/ha	8,733	10,333
	Family labor	meticals/ha	0	3,913
	Hired labor	meticals/ha	8,000	8,000
	<i>Subtotal</i>	meticals/ha	33,623	39,736
	/ Yield (4 Tons/ha)	meticals/ton paddy	8,406	9,934
Rice milling	Labor, fuel, electricity, packaging, fixed costs, net of husks & bran	meticals/ton paddy	2,827	2,827
Subtotal		meticals/ton paddy	11,233	12,761
	/ Milling ratio (67 percent)	meticals/ton milled rice	16,766	19,047
Transport	Rice mill to Maputo	meticals/ton milled rice	1,000	1,000
TOTAL	Maputo Wholesale	meticals/ton milled rice	17,766	20,047

Source: HICEP, Study Team Analysis

²⁹ The former is based on field interviews, while the latter is taken from a Famine Early Warning System Network July 2014 market price, adjusted by 90 percent to infer a wholesale price.

³⁰ These findings confirm those in Agrifood Consulting International (2005).

Profitability Analysis			Financial	Economic
FARMGATE				
Gross revenue		meticals/ton paddy	9,000	9,000
Costs		meticals/ton paddy	8,406	9,934
Net revenue		meticals/ton paddy	594	(934)
Cost-benefit ratio			0.93	1.10
Return to family labor			19	
MAPUTO, WHOLESALE				
Gross revenue		meticals/ton milled rice	22,500	14,219
Costs		meticals/ton milled rice	17,766	20,047
Net revenue		meticals/ton milled rice	4,734	(5,828)
Cost-benefit ratio			0.79	1.41

Source: HICEP, Study Team Analysis

These findings underscore the technological challenges faced as policies and programs strive to support significant yield increases and scale up production. Without such productivity improvements, Mozambique will be unable to compete, i.e., unable to economically substitute domestic production for rice imports.

POTENTIAL IMPACTS OF DUTCH DISEASE

Sharply rising inflows of foreign exchange from export sales (for example, of natural resources such as coal and natural gas) can lead to strengthening of the value of the local currency, relative to foreign currencies. The immediate “exchange rate effect” can be an appreciation of the currency, which may set in motion a set of economic consequences. How might this impact the rice value chain? Table 13 shows the potential shifts in profitability.

- Exchange rate effect: If we assume metical appreciation from the current exchange rate of 30 metical/dollar to 20 metical/dollar, this would result in lowering both the cost in meticals of imported inputs and the price in meticals of imported rice. Both financial and economic profitability become negative under such a scenario.
- Innovation effects: If we assume adoption of higher yielding technology, such as the Wanbao package, and more disciplined work culture, paddy rice yields could increase from their current level of 4 to at least 6-8 tons per hectare. However, a yield of 9 tons per hectare would be required to break even, in terms of economic profitability, at an exchange rate of 20 metical/dollar.

TABLE 13: IMPACTS OF DUTCH DISEASE ON RICE PROFITABILITY

Profitability Analysis			Financial	Economic
Exchange Rate = 20 metical/dollar				
Gross revenue		meticals/ton		9,646
Costs		meticals/ton		16,757
Net revenue		meticals/ton		(7,111)
Cost-benefit ratio				1.74
Exchange Rate = 20 metical/dollar & Yield = 9 T/HA				
Gross revenue		meticals/ton		9,646
Costs		meticals/ton		9,497
Net revenue		meticals/ton		149
Cost-benefit ratio				0.98

Source: Study Team Analysis

3.6. SOYBEANS

The cultivation of soybeans in Mozambique is experiencing rapid growth. Attempts to introduce soybeans in Mozambique date back to the 1980s. However, early efforts were disrupted by the civil war. In 2005 production of soybeans was reintroduced, mostly by NGOs such as World Vision and CLUSA³¹, focusing initially on the development of improved seed varieties. Zambézia, Tete, and Manica provinces are the targeted areas for soybean production.

Since 2008/09 TechnoServe and CLUSA have promoted the scale-up of soybean production to supply the poultry industry in substitution for imported soybean cake. In the last five years soybean production has grown more than six-fold (about 60 percent annual average growth)³². Key private sector investments in outgrower production and soybean processing have been made by MOCOTEX, Africa Century Limitada, Corredor Agro, Rei do Agro, Hoyo-Hoyo, AgroMoz, Alif Quimica, and Alan le Grange. In 2009 Mozambique's total consumption of soy cake, primarily by a growing poultry industry, was estimated at 35,000 Million Tons, of which 78 percent was imported. Demand for soy cake continued growing to 42,000 MT in 2010, and is expected to reach 137,000 MT in 2020. Soybean thus has huge potential growth in the Southern Africa region and is becoming a major cash crop for smallholder farmers (Monitor Group 2012).

Small numbers of "small" farmers are now "emerging" as commercial farmers, growing soybeans on larger plots of land (over 1.5 hectares to a few growing on over 4 hectares, according to Hanlon and Smart (2012, 3) and earning substantial profits (equivalent to several hundred dollars to over 1,000 dollars). However, progression to the commercial level requires secure markets, access to credit in order to rent in mechanization services or purchase the equipment, particularly for land preparation as well access to quality seed.

PRODUCTION CHARACTERISTICS

Soybean agronomic research and development, led by the IIAM (Mozambican Institute of Agrarian Research) in collaboration with the International Institute for Tropical Agriculture, has been instrumental in enhancing productivity of smallholder soybean farmers through increased access to improved varieties and crop production practices.

Three main production systems exist in Mozambique: (1) smallholder farmers, growing on plots of 0-10 hectares, with no mechanization and generally little or no use of inoculants³³, achieving yields of around 1.2 tons per hectare; (2) medium-sized producers, cultivating 10-20 hectares, using mechanization, inoculants, and improved seeds, with yields of 1.5 tons/ha, and (3) large, commercial companies, using their own production equipment, improved seed varieties, and inoculants, with yields around 1.5-2.2 tons per hectare. Mozambique's average soybean yield today is approximately 1.3 tons per hectare (versus 0.5 tons per hectare four years ago), as compared with yields in South Africa, currently 1.7 tons/ha.

Smallholder farmers' access to seeds is mainly through Agricultural departments, TechnoServe's and CLUSA's seed distribution programs³⁴. Private companies outsource their own needs of seeds and distribute these to their outgrowers' schemes. Smallholder farmers use mostly family labor.



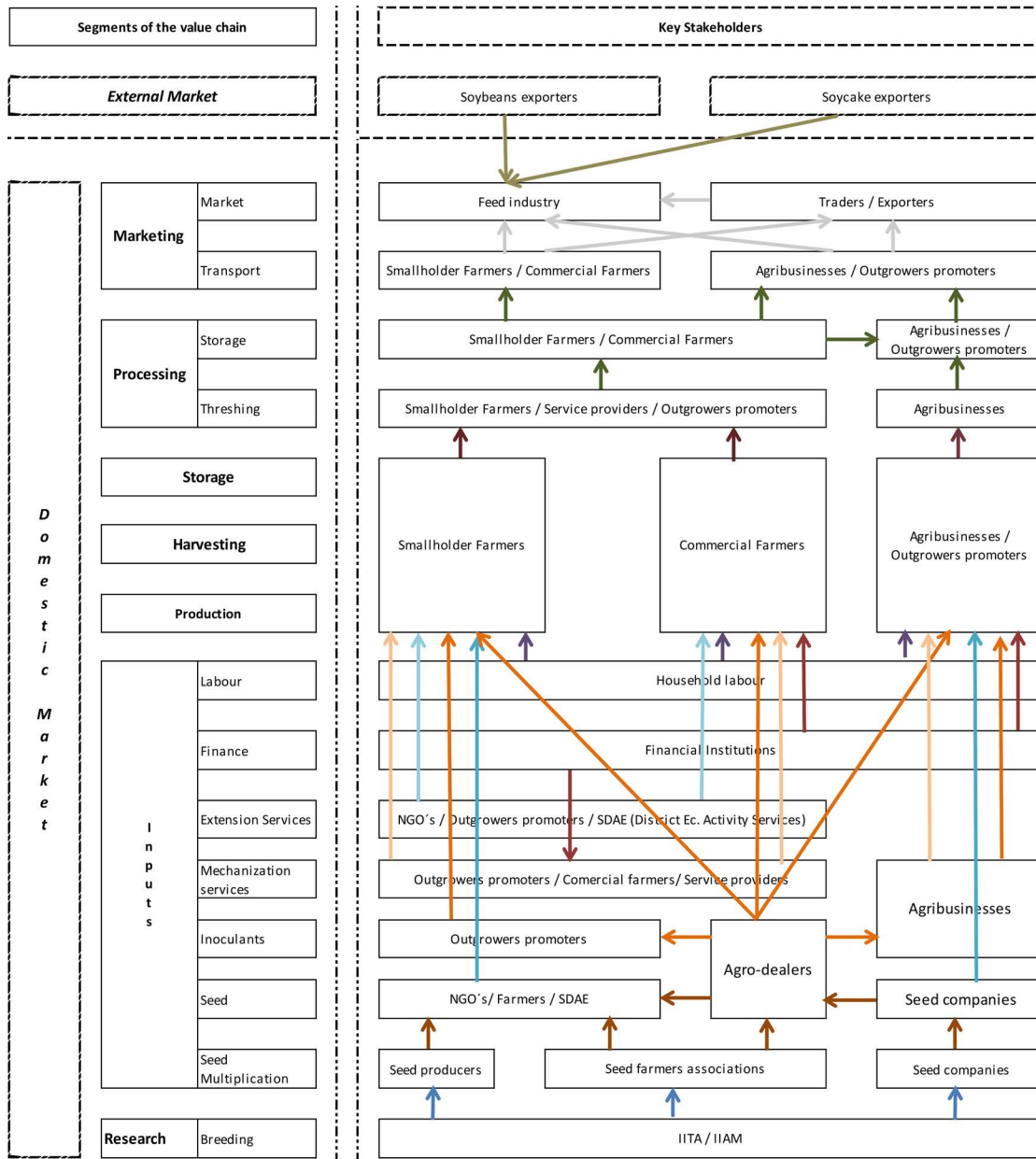
³¹ The Cooperative League of the USA (CLUSA) is the international arm of the National Cooperative Business Association, which provides technical assistance to develop cooperatives internationally.

³² Interview with Luis Pereira, agricultural program director of Technoserve.

³³ Inoculants introduce commercially prepared sources of bacteria to promote nitrogen fixation by soy plants and improve yields. They are used instead of chemical fertilizers. The use of inoculants was introduced by TechnoServe. Inoculants are imported from Brazil by private agri-input suppliers Agrifocus and Biochem.

³⁴ While encouraging farmers to adopt new technologies, the existence of free input distribution may undermine efforts to establish private input distribution networks.

FIGURE 13: SOYBEAN VALUE CHAIN FLOWCHART

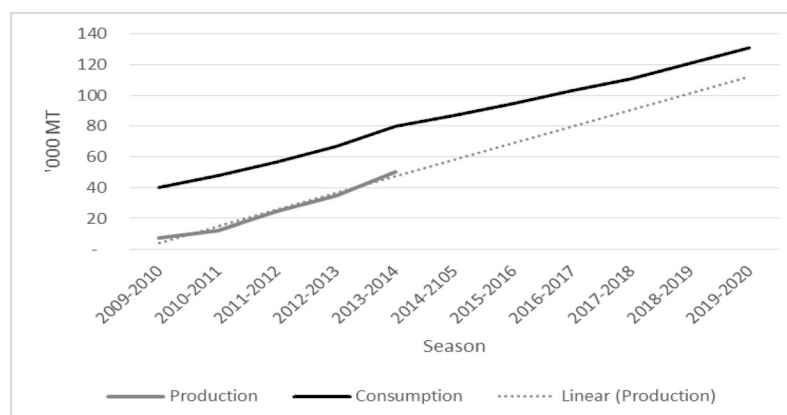


Source: Study team analysis

MARKETING

Smallholder farmers harvest, thresh, and store soybeans at their premises before marketing. Soy cake processing is done by companies in Nampula (African Century Limitada, New Horizons, and Gani Comercial), Chimoio (Abílio Antunes), and Maputo (Companhia Industrial da Matola, MEREC Industries, and Higest). It would appear that full-fat soy cake is being used in the feed industry, as soybean oil is not widely consumed in the domestic market, nor is it exported.

FIGURE 14: MOZAMBIQUE'S SOYBEAN PRODUCTION VS CONSUMPTION TRENDS



Source: TechnoServe (Southern Africa Regional Soy Study, 2011) and Team Analysis

The poultry industry does not contract in advance with farmers for soybeans, but rather buys beans from farmers and traders in bulk at nearby market points. Demand for soybeans in central and northern Mozambique is met by domestic production of soybeans in the same region. Demand in Maputo for soybeans is met fully by imports, accounting for about 50 percent of the total of 67,000 MT (Figure 14) of soybeans that are consumed per year.

Imports of soybean cake into southern Mozambique from South Africa, Argentina, India, and Malawi compete with domestic supply, as transport and logistics costs from central and northern regions to Maputo are relatively high, costing approximately 50 meticals per ton-kilometer, according to a private transporter.

A key to competitive growth of soybean production is continued growth in domestic poultry industry demand for the beans as a feed input. Relative per capita poultry consumption figures are suggestive of the opportunities for expansion, ranging from 1.03 and 1.56 kg per capita in Tanzania and Mozambique, respectively, to 31.94 kg per capita in South Africa (OECD-FAO Agricultural Outlook, 2014-2023). TechnoServe reports that Mozambique's poultry industry grew from a 25 million dollar industry in 2005 to over six times that size by 2009, despite the presence in the domestic market of low-cost, frozen chicken from Brazil, by way of extended shelf lives in Middle Eastern supermarkets³⁵. In addition to promoting soy production, TechnoServe has worked on local sourcing advertising campaigns and support for an emerging Mozambican Aviculture Association to deliver technical industry to poultry integrators and to lobby government for increased efforts to protect against potentially unsafe poultry imports. The result has been significant expansion of market share for Mozambican broilers, now accounting for three out of four broilers sold. In addition to domestic investors, South African companies see Mozambique as a lucrative market with great potential for growth (Visser 2012).

Some soy stakeholders in Mozambique anticipate that demand for soybeans from the domestic poultry industry may be met in the coming 3 to 4 years, leading Mozambique to become a net surplus producer of soybeans. Should that scenario be realized it will be of paramount importance to explore prospects for alternative value-added markets in the domestic industry, through the promotion of consumption of soybeans as a fresh legume or value-added products such as soy oil, soy milk, or soy tofu (a protein substitute that is very popular in Asia). Some initiatives in Gurué and Manica already seek to introduce value-added products such as soybean milk, yogurt, and powder. Alternatively, regional markets may become of interest, to export soybeans or to process locally for soybean oil and export soy cake to net deficit countries in the region³⁶. In the case of exports, Mozambique's viability as a competitive producer will have to be evaluated relative to global FOB prices, not CIF prices, which would be 50-60 dollars lower.

³⁵ Technoserve, "Poultry Promotes Prosperity in Mozambique," (no date); <http://www.technoserve.org/our-work/stories/poultry-promotes-prosperity>.

³⁶ Opperman and Varia (2011) report that Southern Africa is largely deficit in soybeans, producing 861,000 tons of soybeans in 2010 compared with total demand of 2 million tons, for both soy cake and soybean oil for human consumption. Poultry consumption

COST STRUCTURE AND DRIVERS

The structure of production costs for soybeans was estimated using the data gathered via stakeholder interviews, including with Lozane Farms, TechnoServe, soybean farmers, traders, INOVAGRO, and CLUSA. The costs are representative of a typical smallholder in an outgrower scheme, producing using a low input/low yield technology, with minimum use of mechanization (exception being a small threshing machine), and using hired labor for one-third of his/her needs.

In this production system, accounting for financial costs on-farm and through to entry of the soy crushing plant, purchased inputs (inoculants, seed, and bags) account for nearly half of on-farm costs, and labor the other half. Production costs are about 70 percent of total cost, with transport and marketing accounting for the remaining 30 percent. When land and labor are fully costed, in the economic analysis, labor costs are over 70 percent of total production cost, which is 83 percent of total cost, delivered to the soy mill.

At 2014 cost structure and prices, soy beans appear to be quite profitable at farm level. The financial producer price used to value farm production is 15 meticals per kilogram. The local price is said to vary significantly throughout the season, however, and reports of producer prices as low as 7 meticals were reported during the summer (though this may be due to post-harvest market pressures). The financial farm-level cost-benefit ratio is 0.39, with a return to family labor of around 35 meticals per day (well below the official minimum wage), while the economic cost-benefit ratio, based on a reference output price derived from the 2014 world price for soybeans of 550 dollars per ton (CIF Rotterdam), for the total value chain is somewhat higher, albeit still profitable (0.71).

TABLE 14: COSTS & PROFITABILITY ESTIMATES: SOYBEANS

Cost Summary		Unit	Financial	Economic
Farm-level	Land	meticals/ha	0	600
	Purchased inputs	meticals/ha	4,427	4,427
	Family labor	meticals/ha	0	5,427
	Hired labor	meticals/ha	2,673	2,673
	<i>Subtotal</i>	meticals/ha	7,100	13,127
	/ Yield (1.2 Tons/ha)	meticals/ton soybeans	5,917	10,940
Transport	Soy farm to poultry farm	meticals/ton soybeans	2,200	2,200
TOTAL	Maputo Wholesale	meticals/ton soybeans	8,117	13,140

Profitability Analysis		Financial	Economic
Farmgate			
Gross revenue		meticals/ton soybeans	15,000
Costs		meticals/ton soybeans	5,917
Net revenue		meticals/ton soybeans	9,083
Cost-benefit ratio			0.39
Return to family labor		meticals/day own-labor	35
Entry, Soy Crushing Mill			
Gross revenue		meticals/ton soybeans	18,568
Costs		meticals/ton soybeans	13,140
Net revenue		meticals/ton soybeans	5,428
Cost-benefit ratio			0.71

Source: JFS, Study Team Analysis

POTENTIAL IMPACTS OF DUTCH DISEASE

- Exchange rate effect: How would the Mozambican soybean subsector “survive” and continue growing if the metical were to appreciate from 30 metical/dollar to 20 metical/dollar? A strong appreciation of metical would lead to a lower price of imported soy-cake, making it more attractive for poultry feed blenders to import soy or soy cake. Furthermore, this would lead to a lower domestic price of soybeans. However, farm-level financial profitability would still be positive, albeit smaller on a per ton basis (from 9,083 metical/ton in the base case to 5,313 metical/ton in this scenario). Economic profitability, however, would be borderline uncompetitive (cost-benefit ratio of 0.96).
- Innovation effect: Increasing yields from 1.2 tons per hectare to 1.5 tons per hectare, even with metical appreciation, would strengthen financial profitability and return the economic cost-benefit ratio to 0.81, indicating profitability.

TABLE 15: IMPACTS OF DUTCH DISEASE ON SOYBEAN PROFITABILITY

Profitability Analysis			Financial (Farm)	Economic (Value Chain)
Exchange Rate = 20 metical/dollar				
Gross revenue		metical/ton	10,000	12,378
Costs		metical/ton	4,687	11,910
Net revenue		metical/ton	5,313	469
Cost-benefit ratio			0.47	0.96
Exchange Rate = 20 metical/dollar & Yield = 1.5 T/HA				
Gross revenue		metical/ton	10,000	12,378
Costs		metical/ton	3,750	9,968
Net revenue		metical/ton	6,250	2,411
Cost-benefit ratio			0.37	0.81

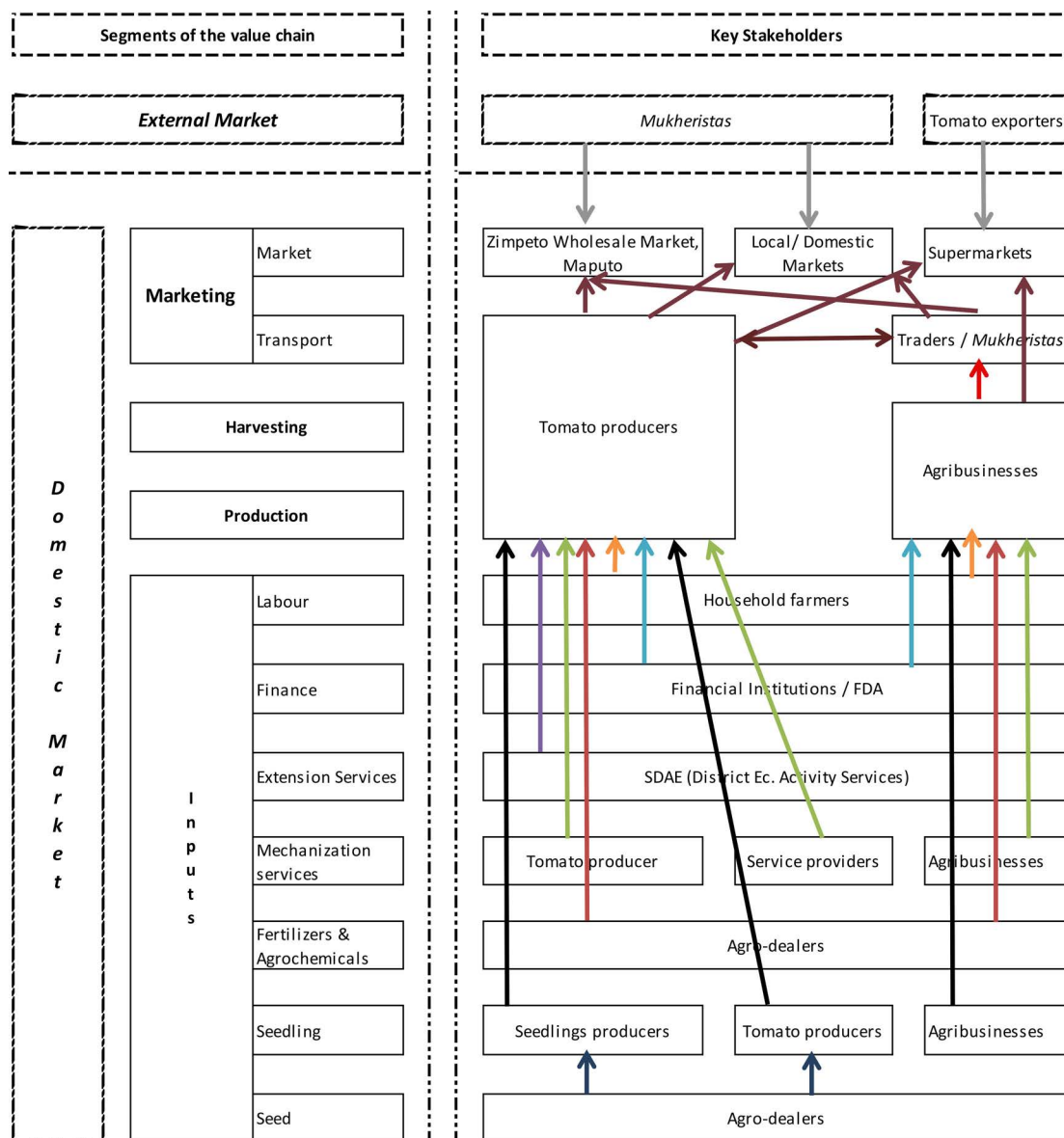
Source: Study Team Analysis



3.7. TOMATOES

Tomatoes, consumption of which is widespread in the Mozambican diet in both urban and rural settings, are a high-value crop, produced in Mozambique predominantly by smallholder farmers. According to the 2010 agricultural census, tomatoes are cultivated by approximately 271 thousand farms, of which 99 percent are small farms. These are located mainly (80 percent) in Nampula, Zambézia, Tete, Manica, and Sofala provinces. The value chain map for tomatoes is outlined in Figure 15.

FIGURE 15: TOMATO VALUE CHAIN FLOWCHART



Source: Study team analysis

PRODUCTION CHARACTERISTICS

Tomato production in Mozambique is seasonal, grown from February to August. Currently, tomatoes are imported in the off-season (summer), mainly from neighbouring South Africa. However, some private investment in greenhouses is being made in/near Maputo by both commercial and small households, with support from the Ministry of Agriculture. In addition, the Mozambican government is providing support for investments in greenhouse nurseries for tomato seedling production.

Two cost models are explored here, based on smallholder production in the Maputo province, District of Moamba, and in the Chokwé irrigated perimeter managed by HICEP, Gaza province. Smallholder farms are market-oriented and use modern inputs (e.g., seedlings, chemicals, irrigation, mechanization, fertilizers). Yields in both models are 40 tons per hectare, although with different cost structures. Both use largely hired labor. In Moamba market-oriented smallholders have access to irrigation systems³⁷, pumping water from the Incomati River, though Government-run perimeters such as the Associação de Moamba, for example. Supply of agriculture extension services is limited to irrigated perimeters, including both public (Ministry of Agriculture) and donor-funded outsourced extension services.

The Ministry of Agriculture has released six tomato varieties to market³⁸. Farmers in Moamba have also been using HTX 14 and Monica, sourced as plant seedlings from South Africa and not cleared by Mozambican authorities, a practice that brings phytosanitary risks. Despite the fact that South Africa does its own screening of plant material, Mozambican growing conditions are sufficiently different that new viruses, fungi, etc., can take hold in Mozambique. Mozambique has been gradually increasing domestic production of vegetables seedlings and reducing its imports.

MARKETING

The bulk of Mozambican tomato production is sold fresh, in 20 kg crates, to domestic retail markets. There is no cold storage; tomatoes are sold in open spaces to local supermarkets and bazaars located in Grande Maputo and its surrounding areas, including the rest of the country. The Maputo suburb of Zimpeto hosts the nation's most important wholesale produce market.

Mukheristas, or informal traders, are the most important tomato importers in Mozambique³⁹. They source mainly from the Mpumalanga and Limpopo provinces of South Africa, supplying imported tomatoes to the fresh/informal food markets of Mozambique, and even to some supermarkets, although the supermarket chains also bring in their own supply.

Mozambique is the largest export market for Southern Africa Development Community (SADC) countries, accounting for 72 percent of total South Africa tomato exports to the SADC region (RSA DAFF 2012). In 2011 South Africa exported over 20,000 tons of tomatoes, of which nearly 18,000 were sent to Mozambique. Whereas South Africa produces tomatoes year-round, tomato production in Mozambique is seasonal.

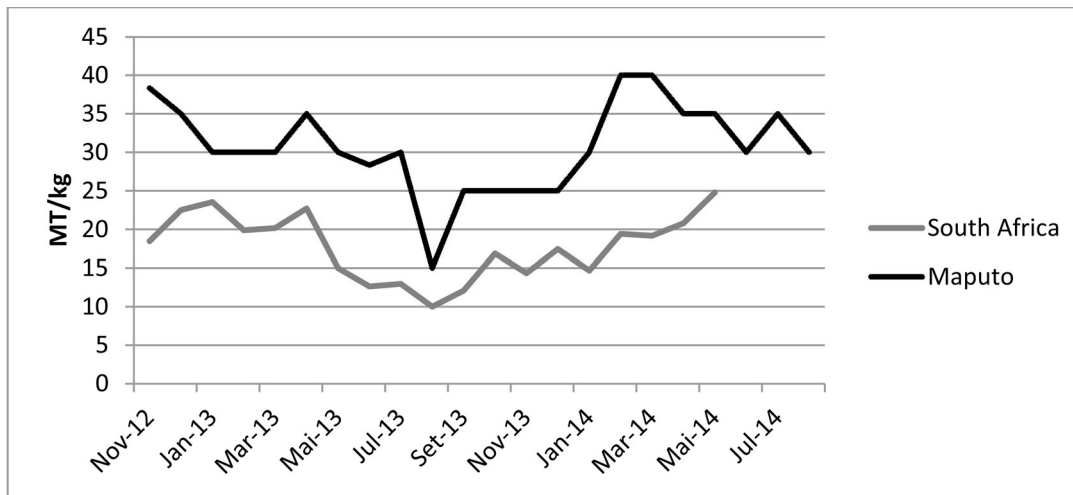


³⁷ Some farmers operate outside the perimeters, accessing irrigation water via private pumps.

³⁸ Hotstuff F1 (Hybrid), Campbell 35, Campbell 37, Rome, Marglobe, and Moneymaker (identified in 1988).

³⁹ See Matsimbe (2013) for deeper discussion of mukheristas.

FIGURE 16: SOUTH AFRICA & MOZAMBIQUE TOMATO PRICES, NOVEMBER 2012-MAY 2014



Note: South Africa prices are an average of Johannesburg and Tshwane monthly average wholesale market prices, whereas Maputo prices are retail prices from the last week of each month.

Sources: South Africa, Department of Agriculture, Forestry, and Fisheries, Market Information Service; Moçambique Sistema de Informação de Mercados Agrícolas de Moçambique (tomato prices were not collected by the SIMA prior to November 2012). Rand prices converted into meticals using exchange rates from Standard Bank.

As seen in Figure 16, Mozambique and South Africa prices track each other. Although South Africa’s prices appear to be lower than prices in Mozambique during the Mozambican harvest, they have not been adjusted for transport from South Africa to Maputo. Also, the team was informed by the Associação dos Mukheristas of an informal agreement between informal traders and domestic tomato producers to refrain from importing from South Africa during the tomato production season in Mozambique (de facto, a voluntary ban on imports).

COST STRUCTURE AND DRIVERS

The costs of imported inputs drive the costs of tomato production in Moamba, and account for almost 50 percent of total financial costs. Hired labor is the next most important financial cost category (38 percent). The remaining 10 percent covers the cost of water and mechanization services. Downstream marketing costs, which represent 37 percent of total wholesale cost, are driven by transport (46 percent), packaging (32 percent), and labor (21 percent). In the Moamba model, the only difference noted between financial and economic costs are the costs of management/ supervision by the farm owner. The Chokwé model suggests lower production costs overall, although yields are reportedly the same (40 tons per hectare). Transport costs to Maputo are significantly higher.

Nevertheless, both tomato cost structures under current market conditions exhibit good profitability, as shown in Table 16 and Table 17 below. The financial cost analysis uses the wholesale price in Maputo (25 meticals per kilogram), whereas the economic analysis takes the (lower) South African wholesale price, adjusted to Maputo (16.6 meticals per kilogram), as its reference price. The only distinction in costs between the two scenarios in Moamba is the cost of farm owner supervision labor, which is included in the economic scenario only. In Chokwé, there is no difference between financial and economic costs. Both financial and economic analyses result in cost-benefit ratios that are substantially below 1, i.e., 0.25 and 0.43, respectively in Moamba, and 0.21 and 0.32, respectively for Chokwé.

TABLE 16: COSTS & PROFITABILITY ESTIMATES: TOMATOES (MOAMBA)

Cost Summary		Unit	Financial	Economic
Farm-level	Land, water	metical/ha	4,100	4,100
	Mechanization services	metical/ha	16,000	16,000
	Purchased inputs (seedlings, fertilizers, other chemicals)	metical/ha	79,370	79,370
	Hired labor	metical/ha	61,500	61,500
	Farm supervision	metical/ha	0	30,000
	<i>Subtotal</i>	metical/ha	160,970	190,970
	/ Yield (40 Tons/ha)	metical/ton tomatoes	4,024	4,774
Transport	Farm to wholesale	metical/ton tomatoes	2,348	2,348
TOTAL	Maputo Wholesale	metical/ton tomatoes	6,373	7,123

Profitability Analysis		Financial	Economic	
Maputo Wholesale				
Gross revenue		metical/ton tomatoes	25,000	16,624
Costs		metical/ton tomatoes	6,373	7,123
Net revenue		metical/ton tomatoes	18,627	9,501
Cost-benefit ratio			0.25	0.43

POTENTIAL IMPACTS OF DUTCH DISEASE

Sharply rising inflows of foreign exchange from export sales (for example, of natural resource such as coal and natural gas) can lead to strengthening of the value of the local currency, relative to foreign currencies. The immediate “exchange rate effect” can be an appreciation of the currency, which may set in motion a set of economic consequences. How might this impact the tomato value chain? Table 18 summarizes potential impacts.

■ **Exchange rate effect:** If we assume metical appreciation from the current exchange rate of 30 metical/dollar to 20 metical/dollar, this could result in lowering both the cost in meticals of imported inputs and the economic reference value of tomatoes. There is no expected impact on the financial price of tomatoes, given the voluntary import ban during Mozambique’s tomato season. In the Moamba sensitivity analysis presented below, the financial price of tomatoes does not change (because of the voluntary import ban), but the prices of tradable inputs decline, leading to a slightly improved financial cost-benefit ratio, from 0.25 to 0.23. Economic profitability, however, declines somewhat, as the output parity price declines in meticals terms from 16,624 meticals per ton to 13,032 meticals per ton, thus raising the economic cost-benefit ratio to 0.51.

■ **Innovation effects:** One possible innovation scenario is the introduction of greenhouse technology in Mozambique, which is expected to permit two production cycles per year and thus a doubling of expected revenues. Costs to evaluate the economic profitability of such a scenario were not available.

TABLE 17: COSTS & PROFITABILITY ESTIMATES: TOMATOES (CHOKWÉ)

Cost Summary		Unit	Financial	Economic
Farm-level	Land, water, irrigation infrastructure	metical/ha	2,400	2,400
	Mechanization services	metical/ha	8,840	8,840
	Purchased inputs	metical/ha	60,210	60,210
	Hired labor	metical/ha	20,800	20,800
	<i>Subtotal</i>	metical/ha	92,250	92,250
	/ Yield (40 Tons/ha)	metical/ton tomatoes	2,306	2,306
Transport	Farm to wholesale	metical/ton tomatoes	2,944	2,944
TOTAL	Maputo Wholesale	metical/ton tomatoes	5,250	5,250

Profitability Analysis		Financial	Economic	
MAPUTO				
Gross revenue		metical/ton tomatoes	25,000	16,624
Costs		metical/ton tomatoes	5,250	5,250
Net revenue		metical/ton tomatoes	19,750	11,373
Cost-benefit ratio			0.21	0.32

Source: HICEP, Study Team Analysis

TABLE 18: IMPACTS OF DUTCH DISEASE ON TOMATO PROFITABILITY (MOAMBA, WHOLESALE)

Profitability Analysis			Financial	Economic
EXCHANGE RATE = 20 METICAL/DOLLAR				
Gross revenue		metical/ton	25,000	13,032
Costs		metical/ton	5,711	6,628
Net revenue		metical/ton	19,289	6,404
Cost-benefit ratio			0.23	0.51

Source: Study Team Analysis

4. SUMMARY & KEY MESSAGES

This review has reviewed factors driving the competitiveness of five agricultural value chains in Mozambique. Although the emphasis here is on cost analysis, other qualitative dimensions such as productivity or “innovation,” quality, agro-processing services, processed value-added, and risk management issues also were considered.

Summary information about the five value chains that have been reviewed here is presented below.

TABLE 19: SUMMARY VALUE CHAIN INFORMATION: PRODUCTION PARAMETERS

	Use of:						Total Number of Labor Days
	Improved seed, Planting materials	Mech	Fertiliz	Other Agro-chem	Irrig	Base Case Yields	
Bananas			Yes	Yes		40 T/ha	N/A
Cotton		Yes*		Yes		700 kg/ha	117
Rice	Yes	Yes	Yes	Yes	Yes	4 T/ha	32 (family) 80 (hired)
Soybeans	Yes		Yes			1.2 T/ha	N/A
Tomatoes	Yes	Yes	Yes	Yes	Yes	40 T/ha	110 days + Permanent labor & Farm owner supervision

Source: Study Team Analysis

**TABLE 20: ECONOMIC COST-BENEFIT RATIOS
(BASE CASE, EXCHANGE RATE, AND YIELD SIMULATIONS)**

	Reference Market	Economic Profitability		
		Base Case (Yield)	@ 20 metical/dollar	@ 20 metical/dollar with Yield Increase
Bananas	CIF Europe	0.40 (40 T/ha)	0.52	0.44 (52 T/ha)
Cotton	FOB	0.67 (0.7 T/ha)	1.01	0.79 (1 T/ha)
Rice	Maputo	1.41 (4 T/ha)	1.74	0.98 (9 T/ha)
Soybeans	Entry, soy mill	0.71 (1.2 T/ha)	0.96	0.81 (1.5 T/ha)
Tomatoes	Maputo	0.43 (40 T/ha)	0.51	<i>Not needed</i>

Source: Study Team Analysis

For largely homogeneous agricultural commodities, however, competitiveness is mostly a cost issue, which is a function of costs at several stages in the value chain:

Costs of Production Family labor is not valued in the financial analysis, because it is not a financial outlay for farmers. Nevertheless, it represents an opportunity cost, and one that farmers weigh as they consider alternative uses for their and their household members' labor.

The cost of labor is included in the economic analysis, at local market wages. Even if upward pressure due to Dutch Disease is not expected on rural wages, it is possible that growth in the informal sectors around extractive industry growth poles or urban areas will provide incentive for rural workers to migrate into cities. It is also possible that infrastructure investment programs, should the government decide to spend some of its natural resource boom revenues in that sector, would also raise the demand for low-skilled labor and thus increase rural wages as alternative livelihood opportunities present themselves.

Economic Profitability Value chain models of cost competitiveness suggest that two – bananas and tomatoes – do not face significant pressures on economic profitability, as both are extremely competitive in both financial and economic cost scenarios, even if the metical appreciates significantly. Both face other threats or challenges, however, including plant pathologies (bananas) and low levels of investment that until now have limited domestic production to specific seasonal windows (tomatoes, produced open-air only). The competitiveness of tomatoes in Mozambique is also limited by scale, wide agroecological diversity that makes it difficult to develop larger scale operations, lack of supply consistency, and the need to improve farm management practices. Also, lack of tomato agro-processing capacity in Mozambique means that excess fresh production cannot be utilized.

Rice profitability at current costs and yield of 4 tons per hectare is negative, in economic terms. This is aggravated by an exchange rate scenario of strong appreciation, and requires a yield improvement of 9 tons to the hectare, which is exceedingly ambitious, to break even, in economic terms, at an exchange rate of 20 metical/dollar. Evidence of promising technologies is found in Xai-Xai where Chinese cooperation is helping to train Mozambican farmers.

When the same exchange rate sensitivity analysis is undertaken for the remaining two value chains – cotton and soybeans – they shift to borderline profitability in economic terms. Both make relatively low use of modern inputs and would benefit from innovations to raise yields. In the case of cotton, ginning companies are interested in pursuing closer cooperation with “emerging” outgrowers who are able to take their farms to the next level in terms of areas cropped, mechanization, and use of improved inputs. The same is true of soybeans, whose economic profitability is strong today at current exchange rates, but the market for which could be threatened if the Mozambican poultry industry falters. There could be potential for greater value-addition in soybean processing or expanded regional trade of soybeans, but logistics costs to move soy out of the center/north into Maputo (or neighboring countries) are high.

High Costs of Logistics Mozambican value chains must contend with high costs of transportation, port inefficiencies, and the general unreliability of electricity for processing. Such high and unreliable logistics costs impose heavy challenges to export to crops such as bananas and cotton. They also provide a “natural protection” against imports up-country for soybeans and rice, whose main markets in Maputo and other coastal urban centers are readily serviced by imports, but which remain competitive for smaller markets inland.

However, the issue of logistics is also important because it results in disincentives to invest in agro-industry. Unless factories are well organized and well connected to help them navigate around these disincentives, they must contend with a host of costs and uncertainties: weak port management that makes consideration of coastal cabotage systems (water-based transport, usually smaller scale, that would deliver goods between and among Mozambique's main urban centers along the coast), port delays that raise obligatory demurrage charges, promises of electricity supply that are not fulfilled when investors arrive, transport costs and risks (especially on the N1 in recent months, with renewed security risks in the center of the country), and border crossings that do not function smoothly.

Costs of Processing In both the cotton and rice value chains, agro-processing facilities are noted for being inefficient and thus costly. Mozambique's average cotton ginning outturn ratio is low, compared with benchmarks, lint quality may be inferior, and seeds are returned to farmers after ginning without treatment. Rice milling costs are said to be high, due to fuel/energy, labor, and other high costs.

Competition from Imports or into Export Markets On the export side, South Africa is a very convenient market for Mozambican plantations, but only if local pathology issues can be controlled. Regarding cotton lint exports, Mozambique's smaller volumes hamper its ability to negotiate for top prices with Asian buyers. In at least one case, this has led ginners to seek other, more niche markets abroad, focusing on higher end lint quality requirements (e.g., Mauritius, Portugal) outside of Asia, where volumes rule. Mozambique might also be able to improve its average FOB prices through greater attention to seed variety development, consistent seeding by variety, improved raw cotton picking so as to minimize the amount of foreign matter in the harvest, and greater emphasis on consistent lint quality by ginners.

Regarding the three import-substitutes examined here, Mozambique is, and will likely remain for some time, a net importer of milled rice to satisfy domestic consumption needs. However, the Chinese package being disseminated by Wanbao, if sustained, offers real promise for raising Mozambique's technological ceiling and vastly expanding domestic rice production. Soy production competes with imported soy cake, but only if the local poultry sector is economically and commercially viable. Also, to be able to grow expand commercial soybean cultivation requires larger plots and hence mechanization (and access to credit to finance mechanization). Though Mozambican tomato production is competitive in-season, the growing calendar is limited by lack of greenhouse infrastructure to compete with South Africa during the summer. South African tomatoes would normally compete year-round in the Maputo market, except for an informal agreement by mukheristas to refrain from importing during Mozambique's growing season.

Policy Issues This work has surfaced a wide range of policy issues that need to be addressed, if the competitiveness of Mozambican agriculture is to be sustained:

- **Land Confusion** over land use rights, and the rights of the government to assign use to foreign investors seeking access to land, muddy the incentives to actively farm land or sell to others who would actively farm it. Without strong land markets, land may go unused or under-utilized.
- **Labor** Official minimum wages in agriculture are significantly above labor productivity (Jones and Tarp 2012) and higher than wages of industrial, i.e., more productive, labor in Asia. Such high minimum wages threaten the competitiveness of Mozambique in general, and Mozambican agriculture, specifically, especially when viewed from a comparative lens. For rural labor, gaining access to wage work (especially for men), on- or off-farm, is considered a significant benefit, especially at the official minimum wage. The latter is 50-100 percent higher than market wages observed in the field. Competition for wage labor, on sugar plantations for example, is heavy in Mozambique (O'Laughlin and Ibraimo 2013).
- **Improved inputs** The low rates of utilization of improved inputs by Mozambican farmers are widely discussed in the literature. It is surprising, in particular, to find that cotton ginners do not provide fertilizer as part of the input package to outgrowers, given how common the practice is elsewhere in Africa and even in Mozambique, as practiced in the tobacco sector. Some indirect benefit of fertilizer distribution for the cash crop is often noted for non-cash crops; why is this not practiced in the cotton sector?

Another input issue that surfaced is the distribution by NGOs of free (or low-cost) soybean seed to farmers. While this may improve soybean productivity, it runs the risk of undercutting the development of private markets for dealers to distribute an array of inputs ⁴⁰.

⁴⁰ An interview held by the manufacturing study team (Salinger and Ennis 2014b) with a fertilizer blending company in Beira underscored that development of a competent and viable input distribution market also requires investment by the government in soil mapping and (possibly) soil testing capabilities in order to be able to sell farmers the appropriate package of fertilizers needed, by crop and by soil deficiency.

A fertilizer blender in Beira observed that work is underway to develop soil maps and train agricultural extension agents in their use in order to be able to recommend tailored agro-chemical packages specific to specific soil conditions to Mozambican farmers.

- **Promotion of foreign investment in agriculture** Negative publicity around foreign investments in agriculture, despite the ability of foreign investors to extend promising new technologies to farmers, makes local governments wary of inking new deals with those who may be able to raise productivity thresholds in Mozambique.
- **Price policy** Only in the case of the cotton subsector are minimum producer prices still set by an official body, in the rest of the value chains examined here, prices are market-determined. The formula for seed cotton pricing used annually by a council comprised of IAM, the Cotton Association of ginner, and farm producers, includes all the right terms. However, the world price is drawn only from the recent past, i.e., no futures price is averaged into the mix. This makes it difficult for ginner to protect themselves against adverse future price movements. While large, international companies operating in this sector may utilize formal commodity market hedging agreements, it is likely that smaller, Mozambican companies do not have this capacity, leaving them vulnerable to adverse price movements.
- **Post harvest operations** A variety of post harvest issues create disincentives to invest. Existing rice milling capacity is very under-utilized, yet public investments in new rice milling are being made.

Mozambique's main cereals crop, maize, is not used by its main maize processor, the Companhia Industrial de Matola, allegedly because local maize is not of an acceptable, consistent quality for milling into maize flour; instead, maize is imported from South Africa for processing into supermarket-ready maize meal packages, suggesting that there is an opportunity to invest in maize collection, drying, storage, and delivery into urban centers for processing. More investigation is needed into the bottlenecks that prevent such investments from occurring.

Delivery of food to emerging extraction industry urban or settlement centers – e.g., Tete, Palma, etc. – is not made by Mozambican companies, rather, food supplies for mining and construction site canteens is said to be air freighted in from South Africa. Anecdotal explanations refer to the inexistence, lack of capacity, or inability to meet food safety/quality standards of Mozambican food processors. Again, further investigation into these issues would help to baseline the bottlenecks faced.

- **Infrastructure** Stories of infrastructure weaknesses abound in Mozambique. Road density is weak, which translates into high domestic transport costs, which in turn means that large tracts of arable land are virtually unusable⁴¹. This in turn means that it is often easier to import products from South Africa or abroad than to distribute food internally within Mozambique. Port management is also inefficient, resulting in long delays and high demurrage charges, which thwarts initiatives to invest in coastal cabotage that could potentially deliver goods more efficiently between Nacala, Beira, and Maputo. Electricity supply is erratic and new electricity connections are often unavailable. This discourages investment, particularly in expensive, capital-intensive agro-processing equipment.
- **Trade** Imports of frozen poultry products from Brazil by way of the Middle East have been reportedly dumped into Mozambican markets, thereby undercutting Mozambican poultry production. TechnoServe first highlighted this issue, and has been working with the government to investigate, document, and log complaints, if needed. The group has also launched a public media campaign to sensitive consumers to “sourcing local chicken,” in order to reinforce demand for local product.

Ports inefficiencies are bothersome for exporters of bananas and cotton lint, as well as importers of soy and rice from world markets. Anecdotes were heard from traders, who complained about the cost of scanning in ports, and demurrage charges associated with delays in on-/off-loading, as well as about charges to use the new single electronic window⁴².

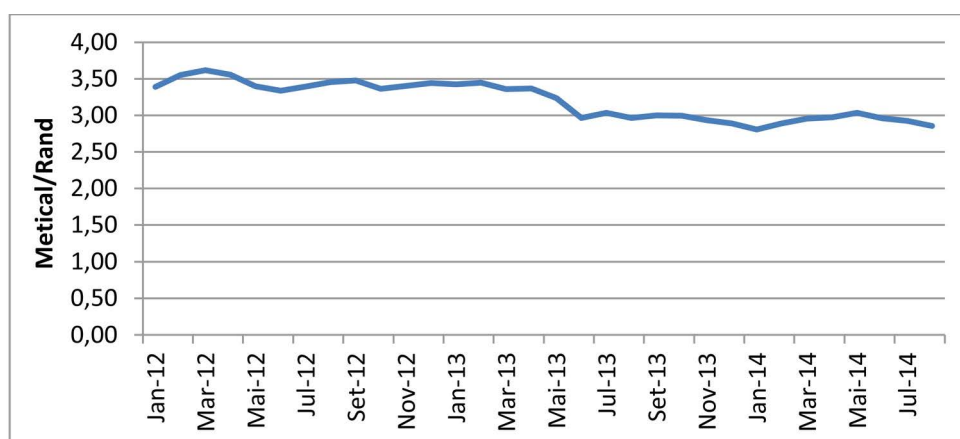
⁴¹ See Heady, Muyanga, and Jayne (2014).

⁴² Claypole (2013) conducted an assessment for SPEED of user reactions to the Single Electronic Window in Mozambique in the early months of implementation, before all modules were in place. It is not known whether a follow-up assessment has been conducted.

Numerous reports about difficult border crossings into or from South Africa were also heard. It is reputed to be difficult not only for mukheristas bringing goods across, but also for foreigners who are receiving new scrutiny from an immigration point of view. While the latter is certainly understandable and justifiable, the goal of SADC protocols is to encourage seamless movement of goods across regional borders with minimal delay. Given the ever-increasing growth of commerce between South Africa and Mozambique over the EN4, and given the growing importance of Maputo port to Pretoria/ Johannesburg (especially as congestion and delays in Durban become increasingly of issue), assuring smooth trade at this particular border crossing is essential.

■ Exchange rates/Competitiveness South Africa is Mozambique’s most important trading partner, furnishing 27 percent of all goods into Mozambique and buying 20 percent of all goods coming from Mozambique in 2012 (as measured by value of trade in dollars, INE 2013). In the last two years, the South African rand has fallen in value, due to international monetary politics. This has had the indirect effect of a strengthening of the metical versus the rand, in terms of nominal exchange rates, of nearly 20 percent since the beginning of 2012. Such appreciation has served to accentuate the competitiveness of South African goods into the Mozambican market. Deep penetration of South African processed foods into Mozambique is well established. Casual review of the range of packaged food products available in one supermarket in Beira suggests how little in the way of processed foods is actually made in Mozambique (despite government efforts to brand “Made in Mozambique”), whether cereals, canned fruits/vegetables/beans, soups, spices, beverages, snacks, frozen foods, etc. While there is little that Mozambique can do about the falling value of the rand, this experience serves as a bit of a preview of “coming attractions” in terms of how Mozambique’s food and agricultural sector may fare if the metical strengthens versus other world currencies as well.

FIGURE 17: MONTHLY AVERAGE METICAL/RAND EXCHANGE RATE, 2012-2014



Source: Standard Bank

4.1. KEY MESSAGES

In the face of the potential threats from the natural resource boom – that is, possible appreciation of the market value of the metical, shifts in relative prices in favor of non-tradables over tradables, and declining incentives to produce certain traditional, tradable agricultural commodities – Mozambique needs to recognize the potential threat and build a strategy to anticipate, manage, and respond to it.

This will involve, in part, a commitment to management of foreign exchange revenues from natural resource exports. Options include keeping some proportion of total revenues in offshore savings accounts or investing them in sovereign wealth funds to control the flow of foreign exchange into the local economy ⁴³. It will also be important that government target public spending to investments that will offset the threat of the stronger currency through productivity and infrastructure improvements to enhance the competitiveness of the agricultural sector. It may also be important to encourage investments in agro-processing to strengthen the competitiveness of local products through productivity and quality improvements and value-addition.

Investments in infrastructure (transport and electricity) will be crucial to contribute to lower marketing and transport costs of agricultural produce and provide improved incentives to agro-industry investments, thereby contributing to an emerging, more competitive agricultural sector in Mozambique.

Another part of the government's natural resource boom response strategy should be the development of a plan to monitor and publicly exhibit indicators of Dutch Disease (such as market exchange rates, real effective exchange rates, production and trade trends, prices of non-tradables such as the wages of skilled, semi-skilled, and low-skilled labor; labor market migration; land, real estate, and construction services; transportation costs; etc.).

⁴³ See Armas (2014) for a somewhat more extensive set of options.

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CHAPTER 2.4
MOZAMBIQUE'S TOURISM
COMPETITIVENESS: WHAT ARE
THE POTENTIAL IMPACTS OF THE
RESOURCE BOOM?

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EXECUTIVE SUMMARY

The Support Program for Economic and Enterprise Development (SPEED), with support from the U.S. Agency for International Development (USAID), provides economic analysis to support Mozambique's private sector. SPEED and CTA (the Mozambican Confederation of Trade Associations) have undertaken a suite of studies that explore the potential impacts of Mozambique's natural resource boom on currency appreciation, competitiveness, the Mozambican labor market, and core economic sectors, namely, agriculture, manufacturing and tourism. The full set of reports is available from www.speed-program.com.

Tourism has the potential to make a significant contribution to the Mozambican economy not only through foreign exchange earnings but also through job creation and socio-economic development in rural areas. Currently the sector employs 270,000 people and represents 3.4% of the country's gross domestic product (GDP).

The Mozambican tourism industry remains a small player in the international tourism market, receiving fewer visitors who in turn spend less when in the country, when compared with rival destinations. The profitability of firms is affected by a series of enabling environment constraints which result in higher operating costs and make it more difficult to attract customers, and therefore increase revenue, than it would be in rival destinations such as Tanzania or Mauritius. This study shows that tourism in Mozambique is currently broadly uncompetitive and seen by visitors as having unreliable infrastructure, low levels of service, and a poor reputation for security. The problems which the sector currently faces are likely to be exacerbated by the resource boom and potential onset of Dutch disease.

The study analyses two key tourism value chains – corporate tourism and leisure tourism. A sample set of firms from these market segments was surveyed and survey results were fed into a model developed for this report. The model allows manipulation of figures based not only on the potential effects of Dutch disease (currency appreciation and labor cost increases) but also on policy reforms. This allows analysis of the potential cost-benefits of reforms both currently and under Dutch disease scenarios. The analysis is conducted in financial terms from the perspective of the firms, considering both operating costs and opportunity costs stemming from business environment constraints.

Profitability is estimated in “economic” terms, i.e. valuing all factors of production and intermediate inputs, the opportunity costs of their use, as well as the costs of any applicable taxes. The profitability analysis also presents sensitivity analyses of the potential impacts of (a) a 9.6 percent nominal strengthening of the metical (derived from IMF forecasts), (b) a 50 percent nominal strengthening of the metical from 30 meticals/\$ to 20 meticals/\$¹, and (c) a scenario that repeats these metical appreciations under conditions of selected policy reforms expected to remove barriers to business competitiveness. The results are summarized next.

¹ C2At 30 MT/\$ 1 metical equals 0.03333 dollars. Appreciation to 20 MT/\$ means that 1 metical equals 0.05 dollars. The increase in value is 50 percent (0.05/0.03333 = 1.50).

TABLE 1: SCENARIO ANALYSIS: CORPORATE TOURISM AND THE IMPACTS OF DUTCH DISEASE

	No ER Appreciation	9.6% ER Appreciation	50% ER Appreciation
Pessimistic Policy Scenario			
Total Revenue	1,390,565,243	1,367,871,218	1,272,367,197
Operating Costs	862,526,005	865,943,334	920,325,450
Taxes	421,930,642	409,919,049	347,807,930
Operating Revenue (meticals)	106,108,596	92,008,835	4,233,817
Operating Revenue (% of Revenue)	7.63%	6.73%	0.33%
Optimistic Policy Scenario			
Total Revenue	1,622,267,846	1,595,793,411	1,484,380,166
Operating Costs	947,426,430	948,799,206	993,160,827
Taxes	507,289,149	494,055,123	427,135,232
Operating Revenue	167,552,267	152,939,082	64,084,106
Operating Revenue (% of Revenue)	10.33%	9.58%	4.32%

Source: Study Team Analysis

TABLE 2: SCENARIO ANALYSIS: LEISURE TOURISM AND THE IMPACTS OF DUTCH DISEASE

	No ER Appreciation	9.6% ER Appreciation	50% ER Appreciation
Pessimistic Policy Scenario			
Total Revenue	297,373,921	292,520,779	272,097,138
Operating Costs	320,778,690	323,558,918	345,346,493
Taxes	59,025,052	58,284,218	55,627,058
Operating Revenue (meticals)	(82,429,821)	(89,322,357)	(128,876,413)
Operating Revenue (% of Revenue)	-27.72%	-30.54%	-47.36%
Optimistic Policy Scenario			
Total Revenue	518,426,143	509,966,410	474,365,037
Operating Costs	520,645,111	520,011,259	527,632,055
Taxes	97,305,571	95,925,471	90,538,851
Operating Revenue	(99,524,539)	(105,970,320)	(143,805,870)
Operating Revenue (% of Revenue)	-19.20%	-20.78%	-30.32%

Source: Study Team Analysis

The baseline analyses (second column from left) suggest that corporate tourism is currently viable (7.63% net profit) within the current cost, revenue and enabling environment framework. The leisure tourism sample, however, suffered major losses in 2013 (-27.72%).

The relative situation remains the same for both samples if the metical strengthens by 9.6%, with profit margins in corporate tourism reducing to 6.73% and losses in the leisure tourism value chain increasing to -30.54%.

In an extreme appreciation scenario (50%), profits for the corporate tourism sector are significantly reduced (to less than 0.5% of total revenue) while losses in the leisure tourism sector increase so dramatically (to -47.36%) that most firms would likely exit the market, leaving only a few who may be able to compete based on exclusive location, size and other significant advantages.

Where policy reform is undertaken alongside currency appreciation this allows the corporate sector to remain profitable in all appreciation scenarios. However, even moderate policy reform is insufficient to assist the leisure tourism segment. At even mild rates of currency appreciation, reforms would reduce losses but not result in overall profitability.

This analysis highlights the current crisis of Mozambique's leisure tourism sector. The corporate segment is basically viable in the current operating environment though it would be somewhat threatened in an extreme currency appreciation scenario. However, leisure tourism is the segment most likely to offer opportunities for small local businesses, create employment in rural areas and contribute to the development of a broad-based tourism sector as envisaged in government policies for the sector. Therefore even without the possible onset of Dutch disease there is reason for concern.

The outcomes of this study highlight the need for urgent and sweeping reform of the business environment, which would not only benefit the tourism sector. Specific areas such as the air transport monopoly, visa policies, quotas on foreign employees and other labor market reforms are particularly critical for the tourism industry.

The report concludes with key takeaway messages about the importance of recognizing the potential threat of the natural resource boom to tourism competitiveness, particularly the leisure tourism sector, and of building a strategy to anticipate, manage, and respond to it. This will involve plans to manage natural resource-derived revenues directly, build labor productivity and invest in basic and transportation infrastructure that will enhance competitiveness and better resist competitive threats.

The study team strongly encourages CTA and its partners in dialogue to use the modeling tool developed for this study to prioritize policy reform in order to ensure the survival of the tourism industry. Updating the model, expanding the sample size, and disseminating the results would be a way to engage the public sector in a fact-based dialogue focused on improving the sector's competitiveness.

1. TOURISM COMPETITIVENESS AND RESOURCE BOOM IMPACTS

The present study is part of a series of studies undertaken by CTA and SPEED to help Mozambique's private sector and government policymakers anticipate the potential impacts of the country's natural resource boom on the Mozambican economy.

Much has been written about the resource boom and its potential impacts on the Mozambican economy – for further details visit www.speed-program.com. The main point of discussion is what impact Dutch disease might have on various sectors of the economy, and in this case, tourism. Dutch disease arises in a resource boom situation when a strong surge in macroeconomic growth driven by extractive industries affects a country's export oriented sectors, such as tourism, and appreciation of the local currency takes place effectively reducing the competitiveness of these sectors.

1.1. TOURISM SECTOR COMPETITIVENESS

Dupeyras and McCallum (2013) define competitiveness in tourism as the ability of a destination to optimize its attractiveness for residents and non-residents, to deliver quality, innovative, and attractive tourism services to consumers (i.e. providing good value for money) and to gain market share on the domestic and global market, while ensuring that the available resources supporting tourism are used efficiently and in a sustainable way ².

² C2Page 7. Dupeyras and MacCallum (2013).

In order to measure the performance of different destinations, a series of key indicators have been developed by different organizations around four categories:

- Industry performance and impacts;
- Ability of a destination to deliver quality and competitive tourism services;
- Attractiveness of a destination;
- Policy responses and economic opportunities.

Understanding and measuring the relative performance of destinations in terms of competitiveness is challenging. Some countries with similar tourism systems and offers may differ considerably in terms of competitiveness. Developing and implementing policies that promote a competitive and sustainable tourism industry requires a good understanding of the determinants of competitiveness. A good understanding relies on appropriate information to support policy analysis and monitoring.

One of the most comprehensive data sets on tourism competitiveness is the World Economic Forum's (WEF) Travel and Tourism Competitiveness Report (TTCR), the most recent edition of which ranked Mozambique 125th out of 140 countries, behind Tanzania, Namibia, Malawi and Zimbabwe. For eleven of the fourteen competitiveness indicators in TTCR (see Table 3) Mozambique falls below the 50th percentile ³.

TABLE 3: WEF TOURISM COMPETITIVENESS INDICATORS FOR MOZAMBIQUE (2013)

Travel and Tourism Competitiveness Ranking, Mozambique (2013)	
Indicator	Rank (Out of 140)
Travel and Tourism Regulatory Framework	121
1. Policy Rules and Regulations	90
2. Environmental Sustainability	49
3. Safety and Security	125
4. Health and Hygiene	136
5. Prioritization of the Travel and Tourism	87
Business Environment and Infrastructure	120
6. Air Transport Infrastructure	114
7. Ground transport Infrastructure	134
8. Tourism Infrastructure	106
9. ICT Infrastructure	133
10. Price Competitiveness in the Travel and Tourism Industry	30
Travel and Tourism Human, Cultural, and Natural Resources	130
11. Human Resources	138
12. Affinity for Travel and Tourism	116
13. Natural Resources	64
14. Cultural Resources	120

Source: World Economic Forum, 2013

³ C2Page 260-261. World Economic Forum, The Travel & Tourism Competitiveness Report, 2013.

The TTCR highlights the presence of negative factors in Mozambique's operating environment which can be expected to result in considerable costs at firm level. Key challenges indicated in TTCR and relevant to this report are quality of human resources (wherein Mozambique ranks second lowest in the world), and transportation infrastructure.

However, while TTCR allows for cross-country comparison, its analysis is not easily translated to firm level because it does not provide quantitative evidence of how these barriers to competitiveness impact firms. The data is useful but does not contribute sufficiently to the type of information required to make policy decisions which will enhance competitiveness. One of the aims of the present report is to present a method of analyzing competitiveness constraints to the sector in a way that can easily highlight the potential positive impact of targeted policy reform.

1.2. POTENTIAL NATURAL RESOURCE BOOM IMPACTS ON THE TOURISM SECTOR

As the foregoing indicates, the tourism sector in Mozambique already faces a number of challenges without having felt the full effects of a natural resource boom.

The specific ways in which natural resource booms affect different sectors vary from place to place. Taking into account the composition and price structure of Mozambique's tourism industry as analyzed in TTCR two specific effects are likely to have the greatest impact:

- Appreciation of the country's exchange rate.
- Increase in labor prices, particularly for skilled labor.

DUTCH DISEASE EFFECT #1: APPRECIATION OF THE METICAL

Despite the large, persistent flows of investment and extractive sector revenues, Mozambique has yet to experience the rapid currency appreciation forecasted by many. This is likely caused in the short term by revenue flows from mega-projects being off-set by the significant costs of start-up⁴. These counter-balancing forces are not likely to last long, however. As mega-projects transition from start-up to operation, their revenues will greatly exceed import costs. Likewise, industry consolidation is a one-off phenomenon and will not support continuous future increases in productivity. The metical can therefore be expected to appreciate further as these trends take hold, making tradable goods and services, such as tourism, more expensive in relation to their foreign competitors.

Barring significant productivity increases in the tourism sector, it is likely that the quality of tourism services will not keep pace with the relative increases in price, thus putting the sector at a competitive disadvantage internationally.

DUTCH DISEASE EFFECT #2: RISING LABOR COSTS

Mozambique's labor market presents a second major challenge to the competitiveness of its tourism sector. Demographically, the workforce is young and under-educated, with 65% of the country's workers under the age of 25 and a mean of 1.2 years of schooling⁵. New workers enter the labor force at a rate of roughly 300,000 a year, outpacing annual job creation by 20,000⁶. Tourism is traditionally a labor-intensive sector and as such is seen by many countries as a key driver of economic transformation, offering a wide range of relatively low-skilled jobs, often in rural as well as urban settings.

However, in a Dutch disease scenario the cost of labor, particularly skilled labor, would be expected to rise thus affecting one of the major overheads for the tourism sector. Therefore, while there may not be a reduction in labor supply due to levels of unskilled entrants into the job market, this report assumes that tourism remains vulnerable to rising labor costs at the semi-skilled and skilled end of the market, as well as resulting in overall minimum wage rises which would affect the cost to employers of employing at the lowest skilled end of the labor market.

⁴ C2Page 161, IMF, Mozambique Rising.

⁵ C2(<http://hdr.undp.org/sites/default/files/Country-Profiles/MOZ.pdf>)

⁶ C2OECD and AfDB estimates put annual growth in labor force at 300,000. Mozambique's Ministry of Labor estimates annual job growth at 280,000. (Salinger and Ennis, 2014)

1.3. TOURISM VALUE CHAINS, COMPARATIVE ADVANTAGE, AND COMPETITIVENESS

The tourism industry itself is not homogenous. Instead, like manufacturing and agriculture it can be divided into value chains. Different value chains may offer different types of comparative advantages within a country or region, and some value chains may be more competitive than others. Tourism value chains are defined by Webber and Labaste (2010, 9) as follows:

Typically, “value chain” describes the full range of value-adding activities required to bring a product or service through the different phases of production, including procurement of raw materials and other inputs, assembly, physical transformation, acquisition of required services such as transport or cooling, and ultimately response to consumer demand (Kaplinsky and Morris 2002). As such, value chains include all of the vertically linked, interdependent processes that generate value for the consumer, as well as horizontal linkages to other value chains that provide intermediate goods and services. Value chains focus on value creation—typically via innovation in products or processes, as well as marketing—and also on the allocation of the incremental value.

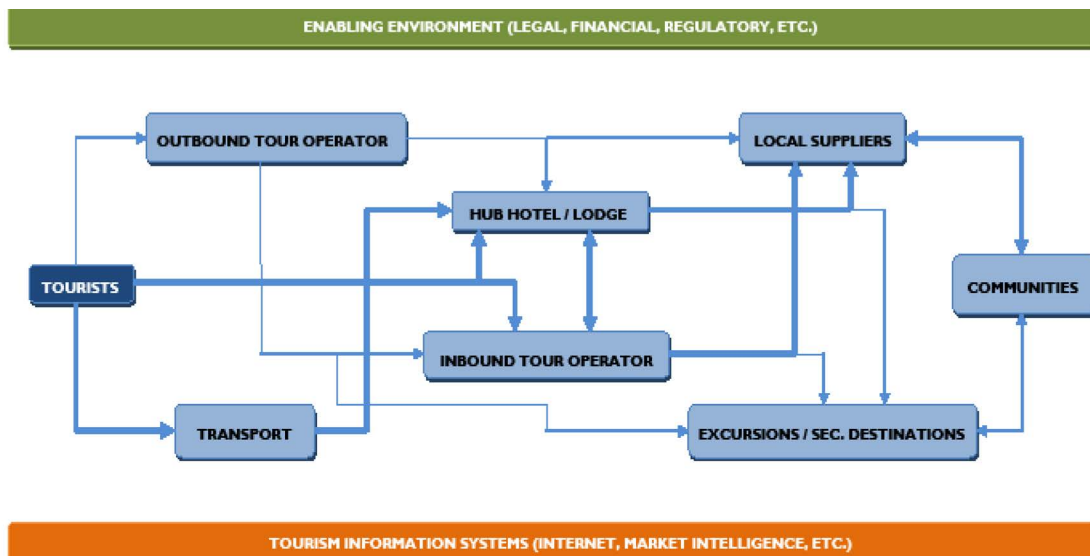
The tourist product is the final service delivered to a visitor. It comprises a series of “experience points” provided by different entities from air carriers and hotels to restaurants and tours. Failure to provide a good experience at any point may undermine the entire experience and accordingly destroy the competitiveness of the destination for that specific value chain. Tourism competitiveness is, therefore, complex and requires the interaction of a diverse set of inter-dependent actors including the public sector.

Understanding the constraints affecting a country’s tourism industry therefore requires an understanding of the role of each value chain component in the overall tourism experience, including the relationship between the various links in the chain, and the performance of service providers, and institutions.

Tourism value chains are structured around the buyer – the tourist. Unlike in other industries, "producing" tourism without a specific consumer, does not take place. While this theoretically means there are potentially as many value chains as tourists, in general and for the purposes of analysis, the sector is broadly segmented according to type of visitor and activity they undertake at their destination. Each segment or value chain requires different products and services, and therefore different strategies, providers and distribution mechanisms.

Tourism value chains are usually mapped by economic organization, and industry and location specificity, within the parameters of expenditure patterns and commercial transactions:

FIGURE 1: TYPICAL TOURISM VALUE CHAIN MAP



Source: Baca and Fertziger (2009)

Analysis along the chain then identifies how value is allocated among the various firms in the industry. To assess operator performance, and thus competitiveness, metrics and indicators are compiled. The approach focuses on the supply-side but also allows for identification of industry-specific constraints. The framework thus developed helps policymakers set priorities for targeted intervention not only at an industry and a location specific level, but also more broadly at national level.

The foregoing guided the process of developing an analytical model for Mozambique’s tourism sector. It resulted in the development of a model which was applied to two value chains. These value chains were chosen based on their importance as drivers of growth, and employment, as well as being the two most significant from the point of view of market share. The selected value chains were:

- Business and corporate travel. The most important segment for Mozambique in terms of number of visitors, profitability and potential growth. The main destinations for business and corporate travel are Maputo, Pemba, Tete and Beira.
- Leisure tourism. This segment has seen its importance and competitiveness significantly reduced. It is currently focused on Ponta do Ouro (south of Maputo), Inhambane (including Bazaruto Archipelago), and Pemba/Cabo Delgado (including Quirimbas Archipelago).

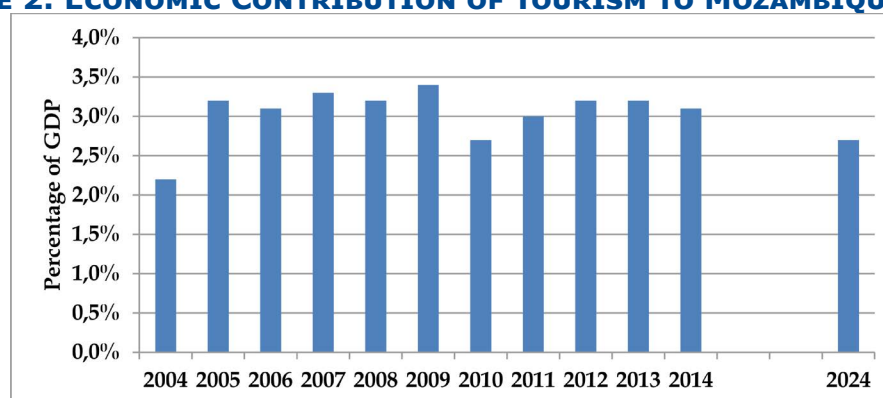
2. OVERVIEW OF MOZAMBIQUE’S TOURISM SECTOR

In contrast to elsewhere in Africa, the majority of international visitors to Mozambique are regional and corporate travelers. Regional visitors represent approximately 78% of total visitor numbers, compared to 55% in Namibia and 38% in South Africa.

South Africa accounts for the bulk of Mozambique’s regional traffic with 45% of all visitors to Mozambique. The only inter-continental markets of any significance are Portugal with 77,500 arrivals in 2013 – a 4% share – and the United States, which represent 3.5% of the total market. All other inter-continental (Europe, Americas and Asia) markets generate a total of 323,000 visitors.

In 2013, the tourism sector represented approximately 3.2% of total gross domestic product (GDP) and employed around 270,000 people ⁷. The sector also generated 8.8 billion meticals in exports (i.e. revenue generated by international visitors), representing 6.8% of total exports. However, these figures represent an actual decline in the contribution of the industry to the overall economy. According to the World Travel and Tourism Council (WTTC) ⁸, at its peak in 2009, tourism represented almost 4% of total GDP. It is expected to represent less than 2.6% in 2024:

FIGURE 2: ECONOMIC CONTRIBUTION OF TOURISM TO MOZAMBIQUE’S GDP



Source: WTTC 2014 Mozambique Country Analysis

⁷ C2WTTC, Economic Impact Research, 2013.

⁸ C2Ibid.

This relative shift in tourism's contribution to GDP is partially explained by the growth in other sectors of the economy, particularly those related to natural resource extraction. However, as the TTCR highlights, there are barriers to competitiveness related to visitor security, labor productivity, and regulatory reforms that have contributed not only to a relative reduction but also to an actual stalling or retrogression in the growth of the tourism sector. For example, in 2013⁹ the country saw an 11% decrease in the number of international and regional visitors, particularly from the main source markets of South Africa (-12%), Portugal (-14%), the United States (-13%) and the rest of Europe (-12%). Some of the major barriers include:

- **Policy and Regulation.** Tourist visas are expensive (e.g. greater than 100 dollars for single entry). The application procedure is lengthy and governed by political – not economic – considerations. Legally-mandated minimum wages, the real value of which increases each year, have the potential to raise labor costs above workers' productivity and result in lower profit margins. The cost of financing is prohibitively high.
- **Air Transport Infrastructure.** The commercial air travel market lacks competition both into and within Mozambique, resulting in high prices. The virtual monopoly of the state-owned air carrier, Linhas Aéreas de Moçambique (LAM), makes domestic flights unreliable and costly, limiting the growth of a domestic and regional tourism market. This contributes to preventing Mozambique from becoming anything more than an “add-on” destination to South Africa.
- **Ground Transportation Infrastructure.** Ground infrastructure, including roads, is lacking or of poor quality. For example lack of signage reduces the usefulness of existing roads for tourism purposes. Road usage by tourists is further hampered by corrupt practices of customs and police officials.
- **Human Resources:** The lack of a comprehensive human resource development strategy for the sector results in lack of training in guiding, language, and other services. This is compounded by a lack of tourism training organizations, and of a system of professional tourism qualifications. Aside from labor costs and skill levels, the issue confronting the sector is the absence of a service-oriented culture. Inadequate employee conduct leads to negative tourism reviews and thus to reduced revenue.
- **Prioritization of Travel & Tourism.** The development of the tourism sector comprises only 2.5% of the annual state budget. Given the industry's potential as an engine for job creation, government support is insufficient. Marketing of the country as a destination, by the government, requires additional funding and should go beyond simply having a presence at international trade shows. Little has been done to create a unique national cultural narrative to market the country. This is an essential pre-requisite for building the country's brand and increasing its share of the global tourism market.

These barriers already affect tourism in Mozambique even before the effects of a resource boom are taken into account.



⁹ C2Ministry of Tourism. Reference Data (2013).

2.1. INDUSTRY PROFILE

Approximately 55% of all tourist arrivals to Mozambique in 2013 (about 842,000 people) are in the country either on business, or visiting friends and relatives (VFR). In the same year, most provinces saw only a very slight increase, or a decrease in the occupancy rates at hotels, with the exceptions of Tete and Niassa:

TABLE 4: OCCUPANCY RATE BY PROVINCE IN PERCENTAGE POINTS (2009 – 2013)

Province	2009	2010	2011	2012	2013	Percent Change 2012/2013
Niassa	20.7	20.9	19	20.1	28.7	42.8
Tete	34.5	40.1	40.8	35.2	47.8	35.9
Gaza	9.4	8.8	8.6	7.5	7.9	4.8
Cabo Delgado	18.7	18.3	22.5	29.7	30.0	0.8
Sofala	34.9	38.3	33.3	33.1	33.1	0.1
Maputo City	44.3	53.8	62.0	39.8	38.2	-4.0
Inhambane	12.3	9.5	11.2	10.0	9.4	-6.1
Manica	13.0	14.4	13.4	13.0	12.2	-6.2
Zambézia	25.3	24.5	26.3	19.9	18.1	-8.9
Maputo Province	21.0	16.5	17.0	15.7	14.2	-9.7
Nampula	20.5	16.0	19.4	22.4	19.4	-13.2

Source: Ministry of Tourism, Reference Indicators for Tourism, 2014.

While the business and VFR segments have traditionally dominated the Mozambican tourism industry¹⁰, the importance of the corporate segment in particular has been fueled by the influx of foreign investment into the gas and mining sectors.

The preponderance of business and VFR tourists has implications for the distribution of tourism products along value chains. Both types of tourist are categorized as Free Independent Travelers (FITs). They organize and customize their trips through purchases of individual products (such as airline tickets) rather than tour-packages (e.g. airline ticket and hotel packaged together). In contrast the leisure segment is predominantly sold through professional customization of exclusive tour packages reserved for the high-yield market (e.g. safaris in the region coupled with a beach extension in Mozambique).

Most travel and tourism products in Mozambique are sold either directly by the service providers (e.g. hotels, airlines), their agents, or travel agencies. Compared to other regional destinations such as South Africa and Tanzania the volume of 'pre-packaged' or 'group' tours is very limited.

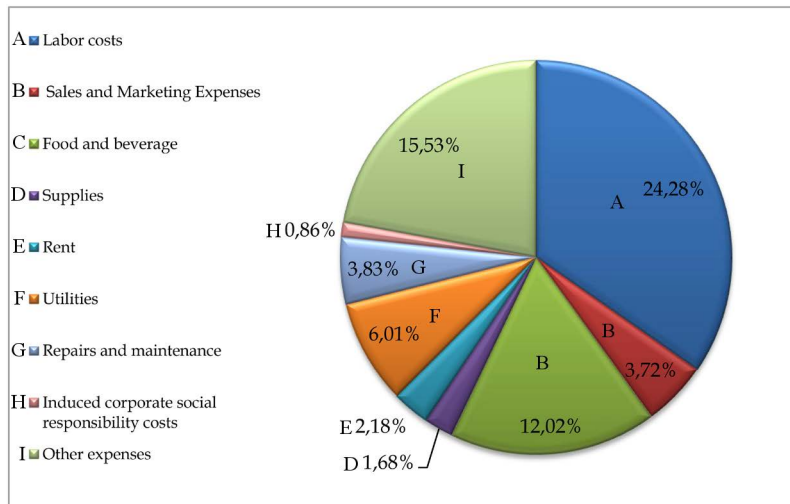
This situation presents both opportunities and challenges. FITs tend to use more local suppliers than 'group' tourists, thus allowing more visitors' revenue to stay in the country and development of a stronger local supply chain and more local tourism business. However, it also limits the growth of a more robust tourism industry because there are fewer market incentives to develop products catering to leisure tourism.

¹⁰ C2 "The Tourism Sector in Mozambique: A Value Chain Analysis, Volume I." (International Finance Corporation (IFC), 2006)

In the commercial distribution system (international tour operators) in the inter-continental markets, Mozambique is primarily sold as an exclusive island beach add-on to other standard travel (primarily safari) packages. This results only in the development of a few pockets of high-value, low-volume accommodation in the island tourism sub-segment.

The profitability of tourism in Mozambique is primarily determined by a handful of variables: labor productivity and costs, costs of imported inputs (primarily food and beverage), and efficiency in the movement of visitors. Analysis for this report identified the main operating costs as:

FIGURE 3: OPERATING COSTS AT BASELINE, FULL SAMPLE

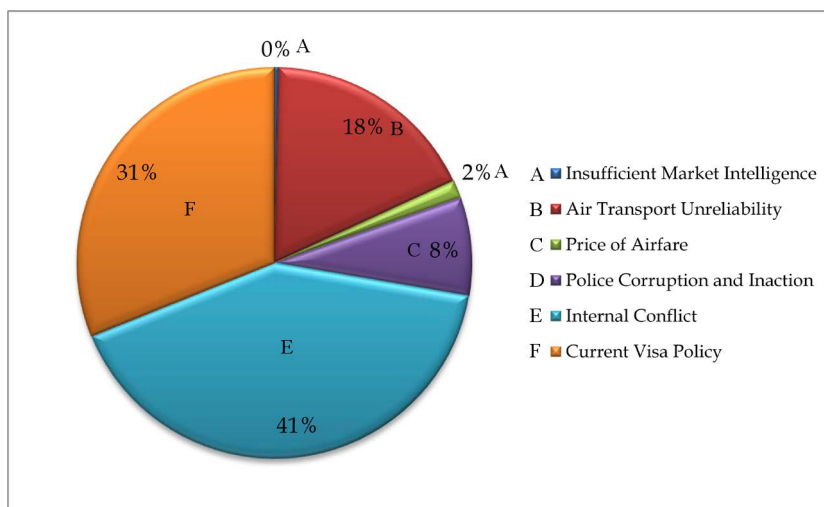


Source: Study Team Analysis

The requirement in tourism to provide personalized and around the clock service for customers means employing large numbers of workers. Low employee productivity makes total labor costs significantly higher for local businesses than in comparable tourism destinations. Total labor costs as a percentage of revenue are almost 25% in Mozambique, whereas they are 22%¹¹ in South Africa and 18.4%¹² in India.

The efficient movement of visitors is also crucial to the competitiveness of the sector. As Figure 4 illustrates, the main limitations to increasing visitors, and therefore revenue, are all associated with policy constrains:

FIGURE 4: 2013 PROFITS FOREGONE BY TOURISM BUSINESS, FULL SAMPLE



Source: Study Team Analysis

¹¹ C22011 Annual Hotel Industry Survey of Operations South Africa (Horwath HTL Consulting 2012).

¹² C2Indian Hotel Industry Survey 2010 – 2011 (Federation of Hotels & Restaurants Associations of India and HVS Hospitality Services 2011).

Over 90% of profits foregone by businesses surveyed for this report result from security problems, visa policies and the air transport monopoly of LAM. In 2013, these foregone profits totaled almost 83.5 million meticals, (2.8 million dollars at current exchange rates), equivalent to almost three times the profits achieved by all the surveyed businesses combined.

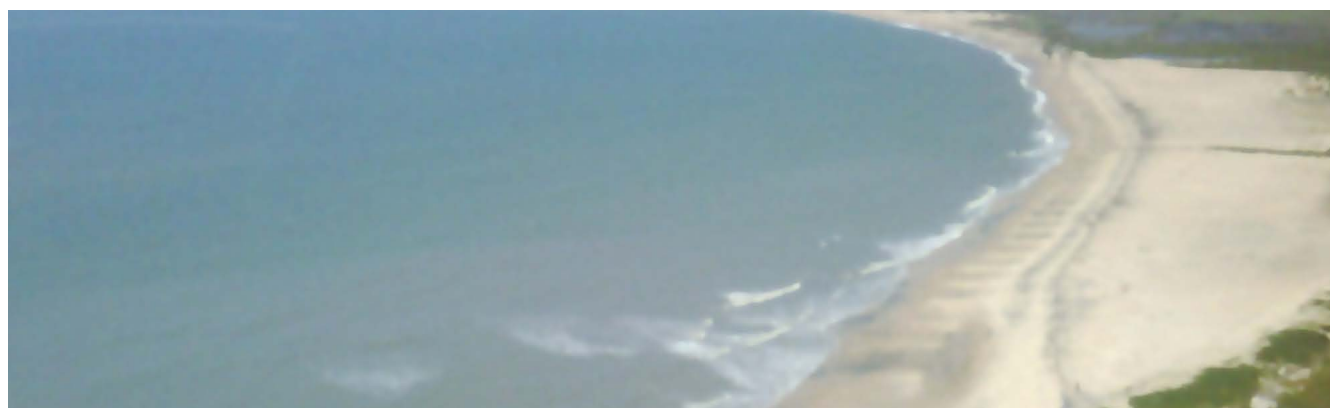
Based on this survey, Mozambique's tourism sector has extremely low net profitability, which results at least partially from onerous taxes and high operating costs as a result of cost and unreliability of utilities (electricity and water), and ongoing investments in training and security. Table 5 illustrates the costs and profitability margins of surveyed businesses:

TABLE 5: FULL SAMPLE: COST & PROFITABILITY ESTIMATES

	Full Sample (meticals)	Full Sample (% of Revenue)
Gross Revenue	1,687,939,164	N/A
Operating Costs	1,183,304,695	70.10%
Labor	409,858,012.63	24.28%
Sales and Marketing	62,765,089	3.72%
Food and Beverage	202,864,612	12.02%
Supplies	28,361,679	1.68%
Rent	36,725,236	2.18%
Utilities	101,515,903	6.01%
Repairs and Maintenance	64,619,044	3.83%
Induced Corporate Social Responsibility (CSR)	14,503,522	0.86%
Other Expenses	262,091,597	15.53%
Taxes (National & Municipal)	470,525,979	27.88%
Operating Profit	34,108,490	2.02%

Source: Study Team Analysis

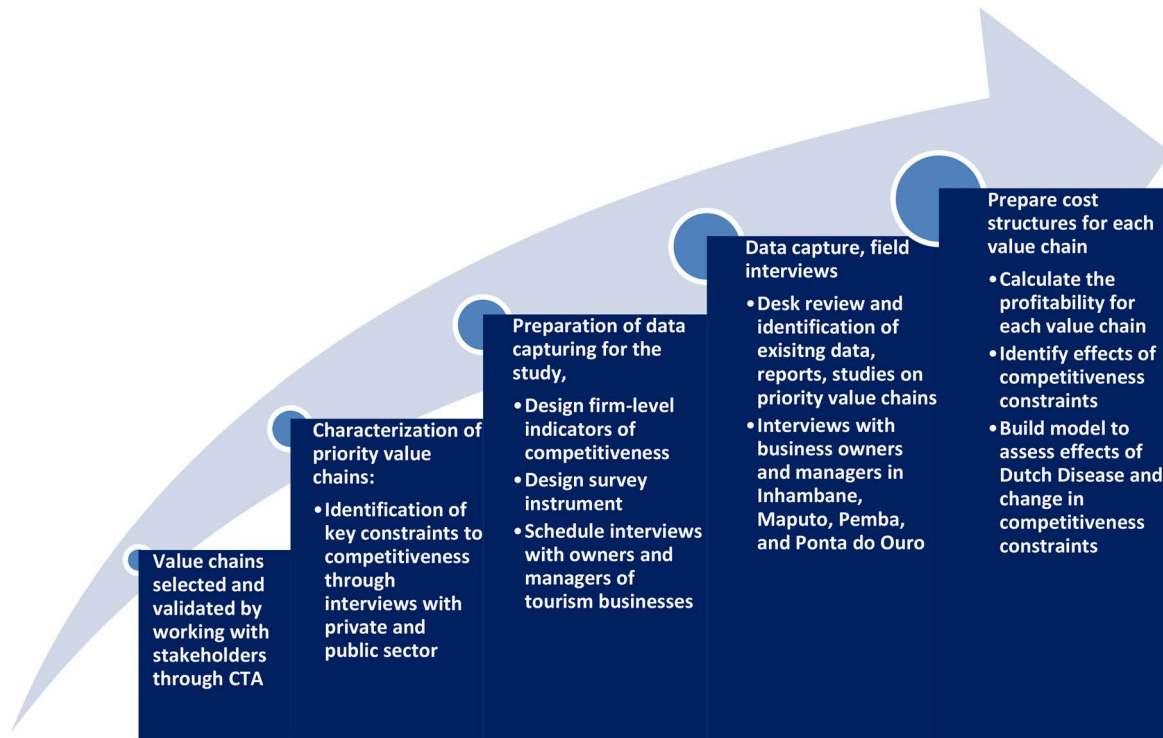
Under these circumstances, a shift towards less demand elastic market segments (corporate tourism) constitutes a rational business response to operating environment constraints. However, these aggregated data mask differences between the value chains examined (see Section 4) with the business travel value chain showing healthier financial and competitiveness indicators, and the leisure travel value chain being under significant financial stress. The current situation will be exacerbated by Dutch disease.



Sofala Province, Mozambique

3. STUDY METHODOLOGY

FIGURE 5: STUDY PROCESS MAP



3.1. SELECTION OF VALUE CHAINS

The value chains analyzed in this study were selected in discussion with CTA’s tourism sub-committee (pelouro) based on the statistical relevance of the segments according to MITUR’s visitor arrivals and purpose of visit statistics ¹³, and alignment with CTA’s policy priorities for the sector.

Validation of the selected value chains was carried out by key stakeholders from government, the private sector, and other relevant organizations and occurred throughout a series of individual discussions culminating in stakeholders’ meetings in June and September 2014.

The selected value chains were leisure and business.

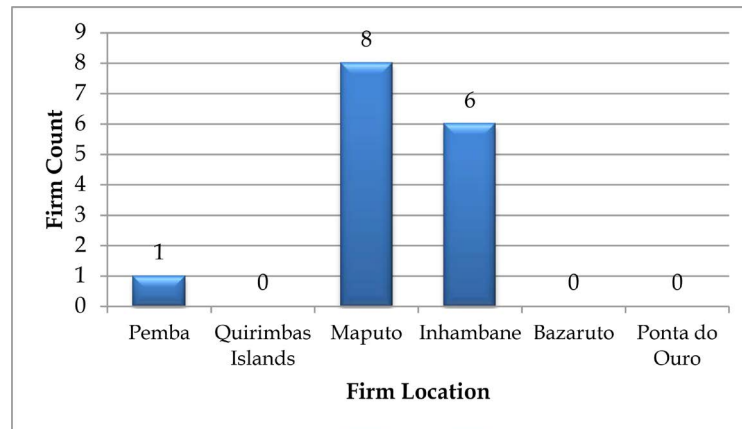
3.2. DATA COLLECTION

Data was gathered in Maputo, Inhambane, Bazaruto, Ponta do Ouro, Pemba, and the Quirimbas Islands. 29 firms out of 62 approached took part. The sample included both Business (N=15) and Leisure (N=14) tourism value chains across the majority of target locations.

¹³ C2Reference indicators for Tourism 2013 (Ministry for Tourism, 2014).

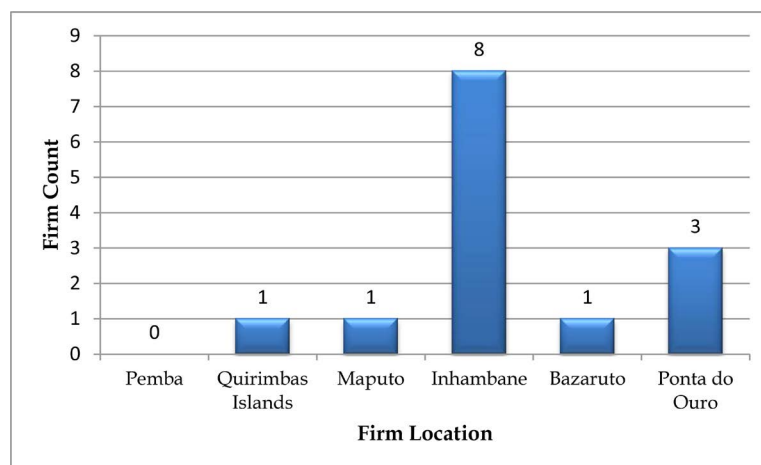
The following figures show sample distribution by segment, location and size:

FIGURE 6: BUSINESS FIRM SAMPLE DISTRIBUTION, FIRM LOCATION



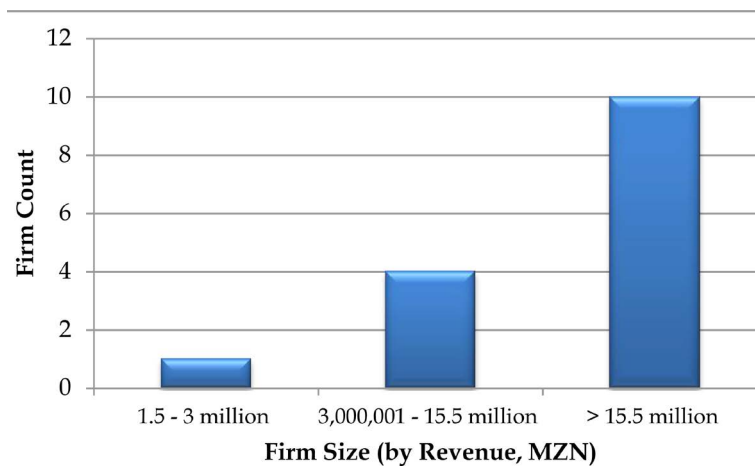
Source: Study Team Analysis

FIGURE 9: LEISURE FIRM SAMPLE DISTRIBUTION, FIRM LOCATION



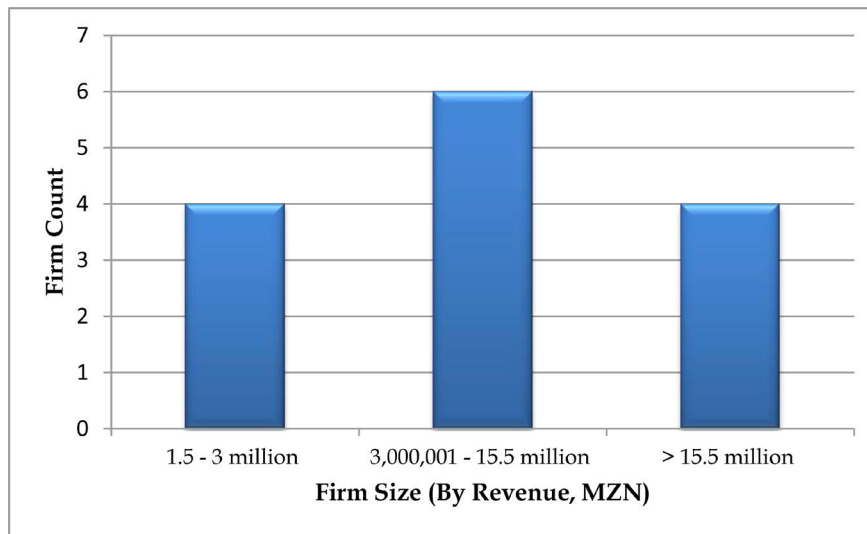
Source: Study Team Analysis

FIGURE 10: BUSINESS FIRM SAMPLE DISTRIBUTION, FIRM SIZE



Source: Study Team Analysis

FIGURE 11: LEISURE FIRM SAMPLE DISTRIBUTION, FIRM SIZE



Source: Study Team Analysis

The survey instrument posed three types of questions: firm characteristics; 2013 financial performance; and non-financial enabling environment issues.

Questions on revenue and operating costs asked for the respective annual totals in local currency. To minimize reporting error, subsequent questions asked the respondents to quantify the components of each of these totals on a percentage basis. While a small degree of reporting precision was sacrificed in reporting costs and revenues in this manner, it allowed smaller firms with less detailed financial records to provide accurate responses and prevented an over-sampling of larger businesses.

The non-financial enabling environment questions were designed to obtain estimates of firm-level effects of operating environment constraints within the tourism industry. The study team identified 23 constraints across the 14 tourism competitiveness components as defined in the TTCR (see Table 6). While these vary in subject matter they capture factors imposing additional operating costs on firms (negative externalities), or preventing firms from conducting additional business (opportunity costs). Responses regarding externalities were collected as percentages of total operating costs, while those regarding opportunity costs were recorded as the number of potential customers who were reported to have refused to patronize the surveyed firm because of concerns with the specified enabling environment constraint. These responses were then converted into local currency equivalents using data on total operating costs, total revenue, and number of customers served for each of the surveyed firms. In this way, the implicit costs to businesses were made explicit by estimating the values of non-financial constraints in financial terms (i.e. in local currency units) for each of the 23 identified constraints across the 29 firms. Table 6, below, gives a complete list of the constraints assessed by the survey instrument.

TABLE 6: COMPETITIVENESS CONSTRAINTS ASSESSED BY SURVEY INSTRUMENT

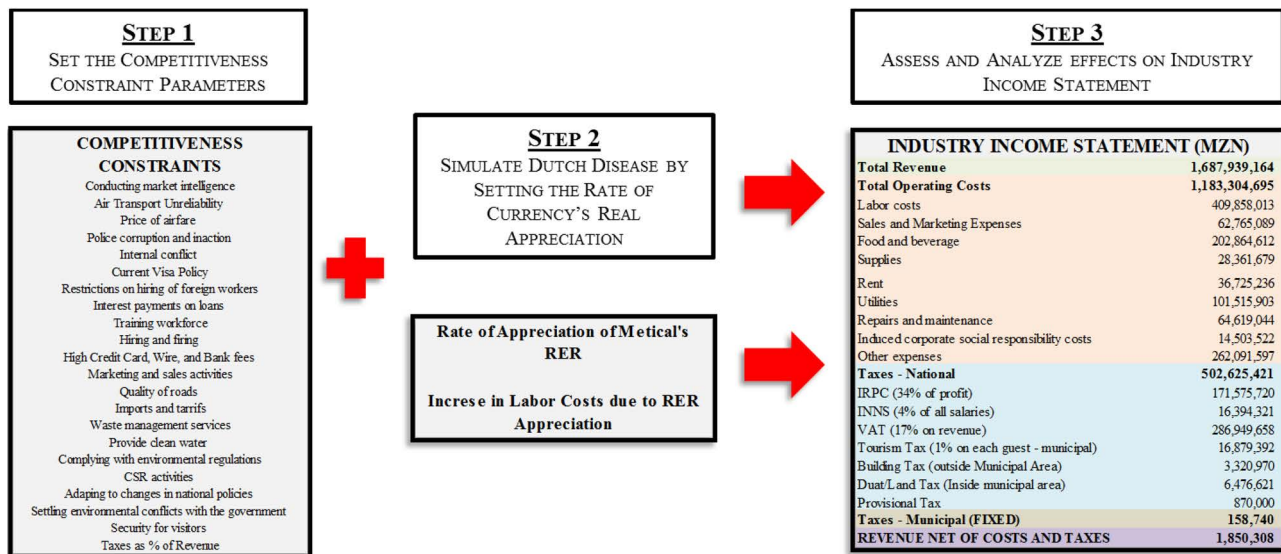
Constraint	Firm-Level Effect	How Expressed in Model (Units)
Market intelligence conducted by firms due to absence of third-party providers	Potential commercial activity forgone	Profit (in local currency) not realized
Unreliability of air transport	Potential commercial activity forgone	Profit (in local currency) not realized
High price of air transport	Potential commercial activity forgone	Profit (in local currency) not realized
Corruption and inaction by local police force	Potential commercial activity forgone	Profit (in local currency) not realized
Political strife within Mozambique	Potential commercial activity forgone	Profit (in local currency) not realized
Restrictiveness of visa policy for visitors	Potential commercial activity forgone	Profit (in local currency) not realized
Restrictions on the hiring of foreign workers	Additional, externally-imposed, cost to businesses	Percentage of sample's total operating cost
High interest payments on loans issued by domestic creditors	Additional, externally-imposed, cost to businesses	Percentage of sample's total operating cost
High employee training costs paid by firms	Additional, externally-imposed, cost to businesses	Percentage of sample's total operating cost
Costs associated with the hiring and firing of employees	Additional, externally-imposed, cost to businesses	Percentage of sample's total operating cost
Costs from high credit card, wire, and bank fees, etc.	Additional, externally-imposed, cost to businesses	Percentage of sample's total operating cost

Constraint	Firm-Level Effect	How Expressed in Model (Units)
Large marketing and sales expenses incurred due to the absence of coordinated country-wide tourism promotion strategy	Additional, externally-imposed, cost to businesses	Percentage of sample's total operating cost
Quality of roads	Additional, externally-imposed, cost to businesses	Percentage of sample's total operating cost
Import and tariffs costs	Additional, externally-imposed, cost to businesses	Percentage of sample's total operating cost
Costs of providing waste management services	Additional, externally-imposed, cost to businesses	Percentage of sample's total operating cost
Costs of providing clean water	Additional, externally-imposed, cost to businesses	Percentage of sample's total operating cost
Costs of complying with environmental regulations	Additional, externally-imposed, cost to businesses	Percentage of sample's total operating cost
Induced corporate social responsibility activities	Additional, externally-imposed, cost to businesses	Percentage of sample's total operating cost
Costs borne in adapting to changes in national policies	Additional, externally-imposed, cost to businesses	Percentage of sample's total operating cost
Costs borne in settling environmental conflicts with the government	Additional, externally-imposed, cost to businesses	Percentage of sample's total operating cost
Costs of providing security for visitors	Additional, externally-imposed, cost to businesses	Percentage of sample's total operating cost
Costs of low labor productivity	Costs to businesses of inefficient and poorly educated labor force	Percentage of sample's total revenue
Tax burden	Additional, externally-imposed, cost to businesses	Percentage of sample's total revenue

3.3. MODEL CONSTRUCTION

The model developed for study provides estimates of the financial health of the sample population of tourism firms under different policy and Dutch disease (DD) scenarios. Its structure is based on that of a traditional income statement and allows for policy and DD variables to be manipulated in a two-stage process. Figure 12 provides an illustration of the analytical process the model uses. To begin with, financial data was extracted from the firm-level surveys, cleaned, and aggregated to provide industry-wide total values for each of the primary income statement components: revenue, operating costs, taxes, and operating profit. This captured the current financial condition of the industry's economic competitiveness and served as the model's baseline measurement.

FIGURE 12: MODEL OF INDUSTRY COMPETITIVENESS IN THE PRESENCE OF DUTCH DISEASE



In the first stage competitiveness constraint variables are adjusted to mimic changes in the business enabling environment. These 23 constraints represent the primary pathways through which business is impeded by an inefficient operating and policy environment. Baseline values quantifying financial harm are listed for each constraint (taken from the responses to the non-financial enabling environment questions in the firm-level survey). Thus, improvements or deteriorations in policy and enabling environment conditions are simulated by adjusting the values of each of these constraints from their baseline, resulting in changes to the sample's income statement (via changes in revenue, costs, taxes, and profitability). Structured in this way, the model allows for detailed financial impact assessments under a wide array of policy and enabling environment scenarios – allowing for the manipulation of both the number of constraints targeted as well as of their value.

Once the policy environment is configured, the DD effects are simulated by setting the rate of appreciation of the metical's real exchange rate (RER) ("Step 2" in Figure 12). Setting the RER appreciation rate determines the appreciation rate of the nominal exchange rate (ER) and calculates the induced effects to labor costs and to import and export volumes. The changes in these variables, in turn, cause each of the components of the model's income statement (revenue, food and beverage expenses, labor costs, etc.) to adjust – either in direct response to one specific dynamic (e.g. labor costs in reaction to RER appreciation), or in response to several inter-related processes (e.g. revenue in reaction to both ER appreciation and decreased export volumes).

These calculations rely on partial elasticity estimates from empirical research by IMF staff, and are listed in Table 7, below¹⁴.

TABLE 7: KEY STATISTICS USED IN THE MODEL CALCULATIONS

Description	Value	Purpose	Source
Import Elasticity to Nominal Exchange Rate Change	0.36	For calculation of the change in various operating costs	Exchange Rates and Trade Balance Adjustment in Emerging Market Economies. IMF (2006) pg. 22
Export Elasticity to Nominal Exchange Rate Change	-0.17	For calculation of the change in revenue	Exchange Rates and Trade Balance Adjustment in Emerging Market Economies. IMF (2006), pg. 17
Wage Elasticity to Real Exchange Rate Change	0.40	For calculation of the change in labor costs	Mishra and Spilimbergo. Exchange Rates and Wages in an Integrated World. IMF Working Paper WP/09/44, 2009.
IMF Inflation forecast for 2014-2019 period	5.60%	For conversion of the RER appreciation rate to that for the nominal exchange rate.	Available from IMF's World Economic Outlook Database, April 2014 available at http://www.imf.org/external/pubs/ft/weo/2014/01/weodata/index.aspx
Percentage of supplies imported	85.00%	For calculation of the change in cost of Supplies	The Tourism Sector in Mozambique: A Value Chain Analysis, Volume I. IFC (2006), pg. 51.
Percentage of food and beverage inputs imported	70.00%	For calculation of the change in Food and Beverage costs	Ibid.
Percentage of sales and marketing services imported	90.00%	For calculation of the change in Sales and Marketing costs	Ibid.

Calibrating the sets of variables under Steps 1 and 2 completes the model run. The resulting income statement displays new values for total revenues, costs, taxes, and profit as well as for their more detailed components (supplies, marketing, etc.) The model also quantifies the value of each of the 23 competitiveness constraints calibrated in Step 1 – both before and after the imposition of DD dynamics. This allows for analysis of specified policy reforms in the context of Dutch disease and to see how DD blunts (or sharpens) the effects of particular reforms.

In addition, the model's two-stage calibration process allows for analytical flexibility. Policy makers unconcerned with Dutch disease dynamics need only to set the RER appreciation variable in Step 2 to "0" to view the effects of specific policy reforms absent Dutch disease. Conversely, DD effects can be viewed in isolation by adjusting only the RER appreciation variable in Step 2. While the analysis presented in this study considers only a select few scenarios in order to assess the tourism sector's economic competitiveness, a multitude of permutations exist and should prove useful for analysis and consideration by policymakers. It is to be hoped that this model is useful to practitioners in their efforts to promote the economic health of Mozambique's tourism industry.

¹⁴ C2It is important to note is that the model in this study uses a combination of partial equilibrium calculations to derive its outputs. The principle applies, then, that the sum of partial equilibrium outcomes does not by rule equal their general equilibrium outcome. While the model outputs in this study are of excellent precision and provide important clarity and insight on the effects and relative importance of potential policy solutions, they by their nature do not capture the totality of indirect effects that would be derived from the simultaneous interaction of multiple variables. Were rigorous, detailed, and accurate data available, a general equilibrium analysis – modeling firm production, household demand, government spending, international trade and balance of payments, etc. – would be able to capture the full array of these interactions (albeit with far less precision). While this limitation is important to acknowledge, it should be clear that the indirect interaction effects not captured, while real, are minimal and do not compromise the model's effectiveness as a tool for policy assessment.

3.4. ASSUMPTIONS AND ANALYSIS

The study team sought to investigate those potential scenarios that are of greatest interest to a wide variety of constituents. The sample data collected was set as the model’s baseline measurement. Five alternate scenarios varying those policy and DD effects of greatest interest to both policy and business leaders were then selected and run through the model, with the resulting output then compared against the baseline. To do this, both a “pessimistic” and an “optimistic” scenario for domestic policy reform were devised and then each subjected to two different Dutch disease simulations with ER appreciations of 9.6% and 50% ¹⁵. To complement the value chain analysis, however, it was necessary to not only view the full 29-firm sample, but to also disaggregate it according to the type of tourism each firm provides – business or leisure. Table 8 provides an outline of the scenarios run.

TABLE 8: SCENARIO ANALYSES CONDUCTED BY STUDY TEAM

Pessimistic Policy Scenario		
Scenario: Current Baseline Measurement (No Policy Reform) For Samples: Full (N=29) Business (N=15) Leisure (N=14)	Scenario: Baseline + 9.6% ER Appreciation Effects For Samples: Full (N=29) Business (N=15) Leisure (N=14)	Scenario: Baseline + 50% ER Appreciation Effects For Samples: Full (N=29) Business (N=15) Leisure (N=14)
Optimistic Policy Scenario		
Scenario: Current Baseline Measurement + Selected Policy Reform For Samples: Full (N=29) Business (N=15) Leisure (N=14)	Scenario: Current Baseline Measurement + Selected Policy Reform + 9.6% ER Appreciation Effects For Samples: Full (N=29) Business (N=15) Leisure (N=14)	Scenario: Current Baseline Measurement + Selected Policy Reform + 50% ER Appreciation Effects For Samples: Full (N=29) Business (N=15) Leisure (N=14)

The “pessimistic” policy reform scenario assumes no policy changes are enacted to improve the competitiveness of firms in the tourism industry. None of the model variables are adjusted from their current value under this assumption. The “optimistic” scenario limits the number of competitiveness constraint variables adjusted to six, and groups these into four competitiveness constraint themes to provide a conceptually clearer illustration for the viewer. The themes are quality of labor (aggregation of “restrictions on the hiring of foreign workers”, “employee training costs”, and “costs of low labor productivity” variables), costs of air transport monopoly (aggregation of the “unreliability of air transport” and “high price of air transport” variables), restrictive visa policy (the “restrictive visa policy” variable), and costs of violence and corruption (an aggregation of the “political strife within Mozambique”, “costs of providing security for visitors”, and “corruption of and inaction by local police” variables). These variables represent the majority of opportunity costs borne by the surveyed firms.

¹⁵ C2The choice of a 9.6% ER appreciation level was made through a combination of IMF forecasts of medium-term RER appreciation (4%) (IMF, Mozambique Rising, 2014, page 149) and inflation rate (5.6%) (IMF, World Economic Outlook Database, 2014). The choice of a 50% ER appreciation rate was made to allow comparability with the analyses performed in Mozambique’s Natural Resource Boom: What Potential Impacts on Agriculture’s Competitiveness? (Calima and Dengo, 2014).

To ensure analytical feasibility, the analysis was also conducted under several simplifying assumptions for each of the six scenarios. They are as follows:

The absorptive capacity of Mozambican economy and government remains low. The appropriate public investments will not be made in sufficient time or at sufficient scale, allowing for large accumulations of foreign assets and increasing annual government revenue by almost 50%¹⁶. The Government of Mozambique does not own or have access to sovereign wealth funds (SWF) or natural resource funds (NRF) for the purpose of regulating the appreciative effects of foreign asset inflows, nor will the Bank of Mozambique (BOM) engage in large-scale sterilized interventions to minimize the impact of the increasing foreign assets.

As service exporters, Mozambican tourism firms are highly exposed to foreign markets and foreign competition. This is because (a) the preponderance of their business is in the trade of services; (b) they compete against companies in other countries and thus operate in a fiercely competitive environment; and (c) hold a relatively large amount of foreign exchange in the course of their business¹⁷.

Exchange rate pass-through (ERPT) to export prices for tourism firms outweighs the ERPT to import prices for Mozambican tourism firms. This means that an appreciation will cause imports to become less expensive, but this benefit will be overridden by the loss in profits as firms are forced to reduce their prices to offset this same appreciation. In net terms, the ERPT differential will adversely impact the financial health of tourism firms.

All taxes were paid by firms in the sample population. While respondents were queried about their tax burden, overall response rate was insufficient for use in the model. As a result, a simplifying assumption was made that all firms paid taxes in accordance with prevailing tax law. Calculation of the tax burden was incorporated into the model formulas.

Municipal taxes are fixed. Survey data and the existing literature on taxation in Mozambique show municipal taxation plays a miniscule role in firms' cost structures. Given the poor quality data and high variation in rates (and in the application of those rates) among municipal tax regimes, it was determined that any effects from changes in the municipal tax burden would be minimal and for this study's purposes inconsequential.

These assumptions attempt to control for exogenous factors and for variables whose significance lies beyond the scope of the report. This allows for a more tractable analytical process and for comparability of scenarios.

3.5. A NOTE ON DATA LIMITATIONS

The results of this report should not be construed as statistically or econometrically robust. Such estimates require time, resources, and access to information that are beyond the scope of this work. Beyond this consideration, more comprehensive data and more precise results were precluded by pervasive problems in the Mozambican business environment. Inconsistent, non-standardized, and poor quality financial record-keeping by tourism firms severely circumscribes sample sizes, compromises accuracy, and renders thorough analytical treatments almost meaningless. Low levels of trust in public institutions to ensure fair and transparent competition prevent many firms from participating (even anonymously) in surveys and other data collection exercises. This also reduces sample sizes, and biases them "upwards" in that the largest and most dominant firms will be more pre-disposed to share confidential business information. The lack of accurate national statistics prevents external validation and leaves open the possibility of various biases caused by self-reporting data. Finally, high levels of firm informality throughout Mozambique¹⁸ imply that this analysis (or indeed any other that deals only with the formal sectors) may not be applicable to a large swath of Mozambican businesses.

¹⁶ C2Page 146, IMF, Mozambique Rising (2014).

¹⁷ C2Page 28, Biggs (2011).

¹⁸ C2While not a perfect proxy, estimates of labor participation in informal sectors provide reasonable insight into the size of Mozambique's informal sector. In 2013, for example, it is estimated that just less than 95% of the labor force worked in the informal sector. (Page 12, "Mozambique – Labour Market Profile 2013". (Ulandssekretariatet, 2013))

Combined, these issues prevent these results from being authoritative and preclude deriving precise and accurate estimates from them (e.g. firm-level productivity, wage growth, demand and supply elasticities, etc.)

This does not mean the results here are without use. The data collected, while not statistically rigorous, does represent the most accurate and detailed picture of the financial health of tourism firms to date. When combined with an understanding of the economy and its business enabling environment (as detailed above), it allows for detailed consideration of possible outcomes.

4. VALUE CHAINS: STRUCTURE, AND POTENTIAL IMPACTS OF DUTCH DISEASE

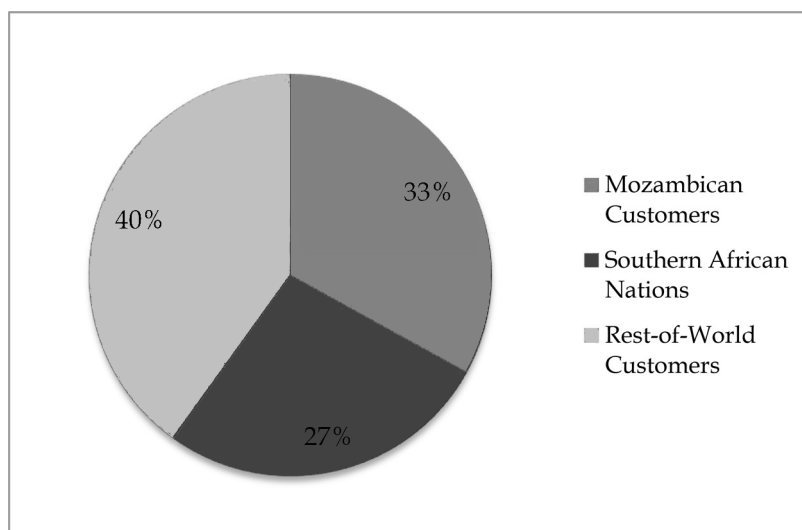
As discussed in Section 1, the profitability of tourism value chains is determined by a range of variables, e.g., productivity and costs of labor, cost of imported food and beverage inputs and efficiency in the movement of visitors. In this report, operating costs as well as opportunity costs (i.e. forgone profit for tourism businesses as a result of policy and regulatory constraints) are analyzed for surveyed firms to identify profitability and highlight points along the value chains where particular constraints arise.

4.1. BUSINESS AND CORPORATE TOURISM

This value chain’s importance has grown along with foreign investment in extractive industries. In 2013, 312,000 visitors indicated they came to the country on business. Maputo is the main corporate destination, followed by Pemba and Tete. The natural resource boom has supported growth in business and corporate travel in Pemba, Beira and Tete.

The main source markets for this value chain are corporate travelers from the Southern Africa region (27%), Mozambique itself (33%) and the rest (40%), comprising Western Europe, the United States, Brazil and the Middle East. A growing number of international corporate visitors come from Asia, and China in particular.

FIGURE 13: 2013 CLIENTELE ORIGIN, BUSINESS FIRM SAMPLE



Source: Study Team Analysis

The predominant sourcing channels for corporate visitors in their country of origin are their own companies' corporate services and to a small extent, travel agencies. Regional corporate visitors, particularly from South Africa, are more likely to secure the services of local travel agents to arrange domestic flights and hotel reservations while domestic business travelers are more likely to make their flight and hotel reservations as well as coordinate local transportation at their final destination.

Given the emerging importance of Tete, Beira and Pemba as corporate travel destinations, domestic flights constitute a key link in this value chain. Currently, the market is dominated by the national carrier, LAM. The monopoly results in high rates for domestic flights as well as unreliability of service. This in turn limits the possibility of linking regional and international corporate travelers to the leisure tourism market.

Despite increases in corporate travel, reported average annual occupancy rates are low (ranging from 30% in Pemba to 47% in Tete). Average daily rates in Maputo hotels are reported to have reduced by over 22% since 2011, and average revenues per available room have reduced by 42% since 2011.

Hotel managers surveyed in the business travel sector noted low staff productivity as reflected by a staff of 1.2 employees per room, instead of 1, which is the World Tourism Organization (WTO) industry standard or as compared with staffing levels in countries such as South Africa and India:

TABLE 9: HOTEL EMPLOYEE PRODUCTIVITY, BUSINESS AND CORPORATE SAMPLE

	Mean	Five Star	Four Star	Three Star
WTO Recommended Standard	1 : 1	2 : 1	1.2 : 1	0.8 : 1
Mozambique (Sample)	2.2 : 1	2.7 : 1	2.2 : 1	1.7 : 1
Corporate and Business Travel	1.2 : 1	1.1 : 1	1.3 : 1	1.2 : 1
India	1.8 : 1	2.7 : 1	1.8 : 1	1.6 : 1
South Africa	0.7 : 1	1.3 : 1	0.6 : 1	0.3 : 1
Eastern Europe	0.5 : 1	0.8 : 1	0.5 : 1	0.2 : 1

Source: Study Team Analysis, WTO

Other issues raised by the sample include:

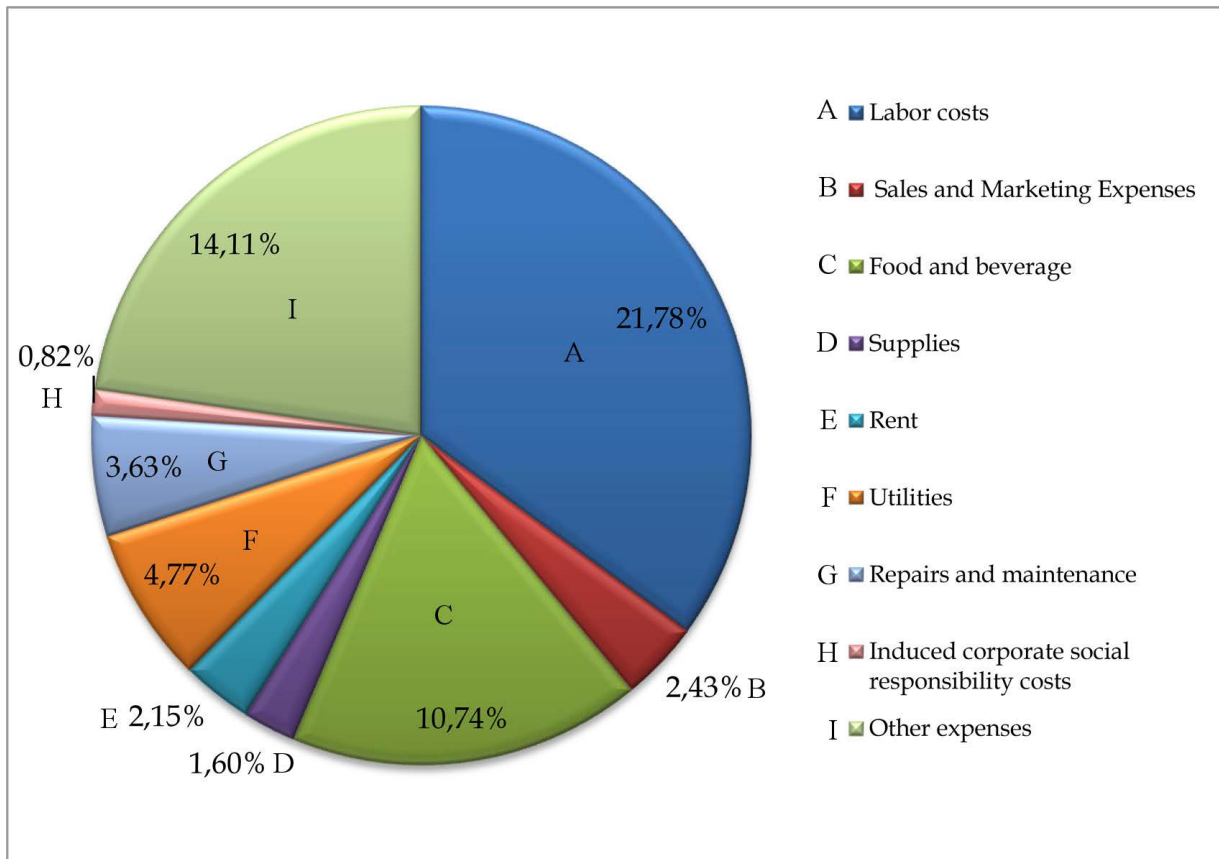
- Water quality
- Electricity quality and supply
- Utility costs (water and electricity)
- High inventory holdings due to regular breakdowns and lack of local service provision
- High cost of import and supply of equipment to compensate for the need to provide utilities in-house
- High cost of food and beverage, much of which is imported
- There are limited numbers of ancillary services available with the sample reporting that local service provision from food to repairs and maintenance are poor or unreliable.

There are few options for excursions or add-ons which could potentially be sold to business travelers.

COST STRUCTURE AND DRIVERS

The analysis of profitability for the corporate tourism value chain is based on financial information provided by 15 firms catering to this segment of the market:

FIGURE 14: 2013 OPERATING COSTS, BUSINESS FIRM SAMPLE



Source: Study Team Analysis

The costs of food and beverage inputs are high (representing 14% of total costs) since they are mostly imported. Fixed costs include security, rent, and utilities, which total over 15% of total operating costs. Sales and marketing expenses are low because of the heavy reliance on third-party distribution channels such as local branches and travel agents. Limited marketing and promotion is conducted in the main generating markets. While labor costs for this value chain are aligned with comparable international destinations (such as South Africa and India) and represent almost 22% of total costs, labor legislation requires that hotels maintain a minimum of three shifts per day of 8 hours each, regardless of the seasonality or occupancy rates. This poses a challenge to efficient management of labor costs and reduces the likelihood of creating full time positions at low skill levels.

TABLE 10: BUSINESS VS. FULL SAMPLE: COST & PROFITABILITY ESTIMATES

	Business Sample (meticals)	Business Sample (% of Revenue)	Full Sample (meticals)	Full Sample (% of Revenue)
Gross Revenue	1,390,565,243	N/A	1,687,939,164	N/A
Operating Costs	862,526,005	62.03%	1,183,304,695	70.10%
Labor	302,848,297	21.78%	409,858,012.63	24.28%
Sales and Marketing	33,795,562	2.43%	62,765,089	3.72%
Food and Beverage	149,388,140	10.74%	202,864,612	12.02%
Supplies	22,265,952	1.60%	28,361,679	1.68%
Rent	29,886,489	2.15%	36,725,236	2.18%
Utilities	66,302,602	4.77%	101,515,903	6.01%
Repairs and Maintenance	50,528,303	3.63%	64,619,044	3.83%
Induced Corporate Social Responsibility (CSR)	11,338,522	0.82%	14,503,522	0.86%
Other Expenses	196,172,137	14.11%	262,091,597	15.53%
Taxes (National & Municipal)	421,930,642	30.34%	470,525,979	27.88%
Operating Profit	106,108,596	7.63%	34,108,490	2.02%

Source: Study Team Analysis

POTENTIAL IMPACTS OF DUTCH DISEASE ON THE BUSINESS TOURISM SECTOR

- **Exchange Rate Effects:** Under a “pessimistic” policy scenario, the exchange rate appreciation impacts firm finances through two pathways. The first is driven by nominal appreciation of the exchange rate, forcing an erosion of the firm’s price competitiveness and resulting in a reduction in revenue and an increase in imported inputs (principally food and beverage, marketing services, and other supplies). In addition, appreciation of the real exchange rate alters the demand for and price of labor and capital. This sets in motion a longer-run reallocation of factors within and across industries, leading to increased labor scarcity within tourism and putting upward pressure on wages and labor costs in the sector. Model results under these conditions show economic profitability declining sharply in both “pessimistic” and “optimistic” policy scenarios. Assuming an ER appreciation rate of 9.6%, the impacts are less significant although they still trigger a decline in profitability of almost 1 percentage point in both policy scenarios.
- **Policy Reform Effects:** As discussed above, most constraints to competitiveness and increased profitability stem from policy and regulatory barriers, such as labor regulations, security, air transport monopoly, and visa policies. If some of the most pressing issues were solved or improved, the effects of currency appreciation and increases in labor costs could be partially offset. The total accrued pre-tax profit from these reforms is presented in Table 11 below.

These reforms would significantly improve the financial performance of corporate tourism businesses and allow them to better withstand the potential impacts of Dutch disease, as illustrated below. However, it is important to notice that under a 50% currency appreciation scenario, the impact would be severe unless revenue (and prices) increase, further reducing the competitiveness of the industry.

TABLE 11: MODEL ADJUSTMENTS FOR OPTIMISTIC POLICY SCENARIO, BUSINESS SAMPLE

Variable	Value of Profit Realized by Sample in Optimistic Policy Scenario (meticals)
Labor Issues Improved	38,742,720
Unreliability of air transport	13,088,079
High price of air transport	282,907
Corruption and inaction by local police force	2,923,170
Political strife within Mozambique	26,015,724
Restrictiveness of visa policy for visitors	25,342,605
Costs of providing security for visitors	45,992,308

Source: Study Team Analysis

TABLE 12: SCENARIO ANALYSIS: CORPORATE TOURISM AND THE IMPACTS OF DUTCH DISEASE

	No ER Appreciation	9.6% ER Appreciation	50% ER Appreciation
Pessimistic Policy Scenario			
Total Revenue	1,390,565,243	1,367,871,218	1,272,367,197
Operating Costs	862,526,005	865,943,334	920,325,450
Taxes	421,930,642	409,919,049	347,807,930
Operating Revenue (meticals)	106,108,596	92,008,835	4,233,817
Operating Revenue (% of Revenue)	7.63%	6.73%	0.33%
Optimistic Policy Scenario			
Total Revenue	1,622,267,846	1,595,793,411	1,484,380,166
Operating Costs	947,426,430	948,799,206	993,160,827
Taxes	507,289,149	494,055,123	427,135,232
Operating Revenue	167,552,267	152,939,082	64,084,106
Operating Revenue (% of Revenue)	10.33%	9.58%	4.32%

Source: Study Team Analysis



Inhambane, Mozambique

4.2. LEISURE TOURISM

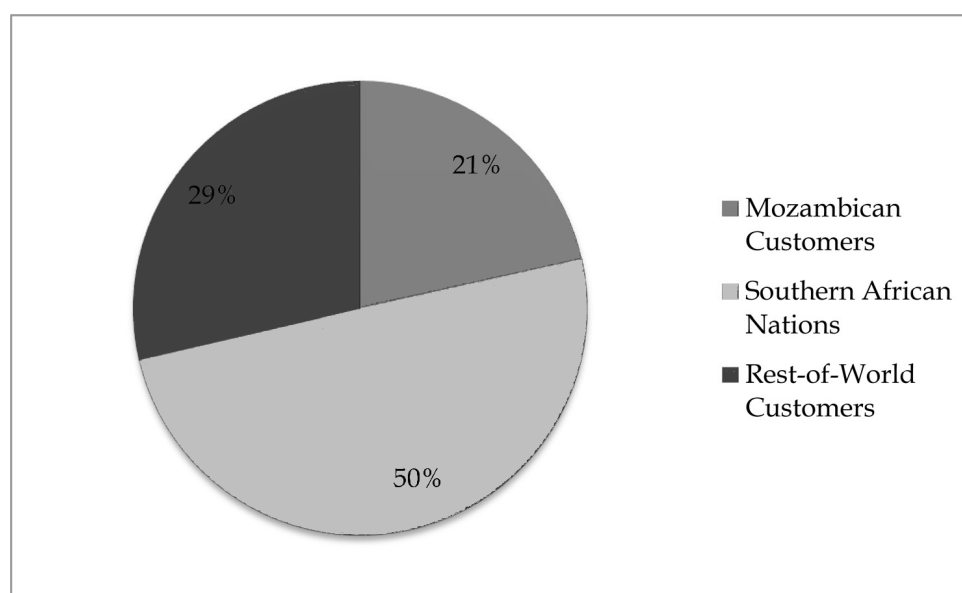
This value chain presents two distinct sub-products: island beach tourism centered on the archipelagos of the Quirimbas and Bazaruto; and the coastal beach product focused on the coast of Inhambane and Vilanculos (in the North) and Ponta do Ouro (south of Maputo). While the island product falls mostly into the luxury category, the coastal resorts cater to all types of travelers, though generally focused on the mid-market, both internationally and domestically.

This segment presents characteristics more aligned to a mature tourism value chain, where outbound and inbound operators and agents collaborate to provide services to domestic and regional visitors. This is particularly the case for the important South African market, where agents on both sides of the border are engaged in commercial relationships to meet the needs of their customers. Nevertheless, the management of leisure tourism is generally characterized by weak collaboration across different stakeholders. This leaves critical destination level issues to be managed by dispersed and individual efforts or not addressed at all.

Most firms in this value chain are medium or small in size which impacts their ability to access new markets and their financial resilience.

The main source markets for this value chain are South Africa (50%), Mozambique (21%), and other markets, primarily Western Europe and the United States (29%).

FIGURE 7: CLIENTELE ORIGIN, LEISURE FIRM SAMPLE



Source: Study Team Analysis

There is a difference between the island product and the coastal beach product as customers for the former are drawn primarily as add-ons to safari itineraries centered on South Africa, Botswana, Namibia, and Tanzania. The traditional dominance of the Portuguese VFR market has been affected by visa requirements. There is evidence of a growing market of Mozambicans (15%), primarily from Maputo, traveling to the island resorts. The reduction in self-drive tourism from South Africa has affected Ponta do Ouro in particular.

The demand for international brokerage services and tour packages for the coastal beach product is weak. This situation is partly explained by the predominance of FITs from South Africa. However, there are other contributing factors such as tour operators and travel agencies in source markets being unable to issue domestic airline tickets. Foreign tour operators and agencies are also not able to access seat inventories on LAM making it more difficult for them to respond to last minute demand from tourists.

The island products are largely managed by international agents, including South African tour operators, by the resorts themselves which have sales representatives in source markets, and by outbound tour operators in the main source markets. This product has a very low rate of participation by domestic intermediaries and ground operators (e.g. ground transport organizers, taxis, car rental agents). The absence of local tour operators impacts lodges by reducing value, flexibility, and service provision and raises operating costs because of the need to engage in non-core activities such as “meet and greet” arrangements and local tour operation.

Infrastructure deficiencies affect the quality, cost, and time of operation for firms in this value chain. For example, the length and strength of the runway at Vilanculos’ airport is insufficient to accommodate anything but turbo-propelled aircrafts. The road to Ponto do Ouro is only suitable for 4x4 vehicles.

Small hotels and lodges constitute the bulk of accommodation in the leisure tourism value chain. Good quality accommodation in coastal resorts outside the islands is limited and considered expensive. Few are able to meet the expectations of upscale international tourists, and the standard and types of services and amenities offered vary widely.

Data suggests that demand and occupancy rates are low for most of the year and hotels and resorts rely heavily on intermediaries for the supply of tourist visitors.

Although hoteliers in northern Mozambique and in the Quirimbas highlighted the same main constraints to doing business as elsewhere, the impact of these is amplified given the remoteness and lack of adequate infrastructure these firms face. Most inputs for hotel and restaurant operations are sourced from Maputo, where most products are imported.

The leisure tourism value chain ranks low when compared to industry standard ratios of employee per room. As Table 13 illustrates, the Mozambican average for leisure hotels is over three times higher than the WTO standard:

TABLE 13: HOTEL EMPLOYEE PRODUCTIVITY, LEISURE SAMPLE

	Average	Five Star	Four Star	Three Star
WTO Recommended Standard	1 : 1	2 : 1	1.2 : 1	0.8 : 1
Mozambique (Full Sample)	2.2 : 1	2.7 : 1	2.2 : 1	1.7 : 1
Mozambique (Leisure Sample)	3.2 : 1	4.2 : 1	3 : 1	2.2 : 1
India	1.8 : 1	2.7 : 1	1.8 : 1	1.6 : 1
South Africa	0.7 : 1	1.3 : 1	0.6 : 1	0.3 : 1
Eastern Europe	0.5 : 1	0.8 : 1	0.5 : 1	0.2 : 1

Source: Study Team Analysis, World Tourism Organization

As is the case in the business value chain, the leisure segment faces issues with:

- Water quality
- Electricity quality and supply
- Utility costs (water and electricity)
- High inventory holdings due to regular breakdowns and lack of local service provision
- High cost of import and supply of equipment to compensate for the need to provide utilities in-house
- High cost of food and beverage, much of which is imported

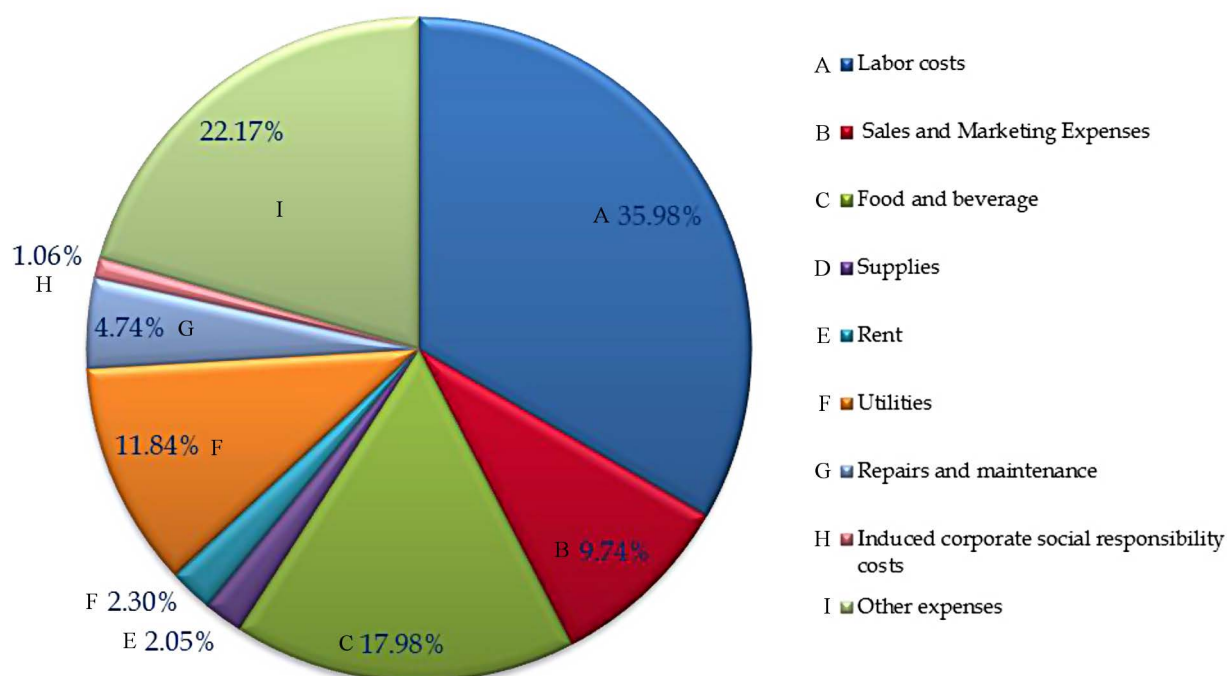
Here too there are limited numbers of ancillary services available with the sample reporting that local service provision from food to repairs and maintenance are poor or unreliable. There are few options for excursions or add-ons.

COST STRUCTURE AND DRIVERS

The analysis of profitability for the leisure tourism value chain is based on financial information provided by 14 firms catering to this segment of the market.

Operating costs for hotels in the leisure tourism value chain are significantly higher than comparable costs for the corporate value chain. The costs of food and beverage inputs are very high (18% of total costs) since they are mostly sourced from outside Mozambique and difficult to replace given the consumption characteristics of the markets. Fixed costs include security, rent and utilities, which total almost 35% of total operating costs and are largely a consequence of the high costs of providing reliable electricity and water to customers in the remotes areas where firms are located. Sales and marketing expenses are higher than the average for the industry in Mozambique because of the need to invest in international promotion and marketing. Unlike firms in the corporate value chain, leisure tourism firms report participating in international and regional trade shows, which requires significant investment. Labor costs for this value chain are almost twice as high as in India and at least 1.5 higher than in South Africa. Moreover, labor costs for leisure segment firms are 10% higher than those for corporate tourism firms as a percentage of total revenue. As the model shows, labor costs represent the biggest threat to the financial viability of the leisure tourism value chain and place it at considerable risk in the face of Dutch disease. Based on current occupancy rates for the industry as a whole, the businesses in this value chain are operating at a significant loss. The information presented in Table 14 supports anecdotal evidence that many leisure tourism businesses rely on external funding (typically from diversified investments) to survive.

FIGURE 8: 2013 OPERATING COSTS, LEISURE FIRM SAMPLE



Source: Study Team Analysis

TABLE 14: LEISURE VS. FULL SAMPLE: COST & PROFITABILITY ESTIMATES

	Leisure Sample (meticals)	Leisure Sample (% of Revenue)	Full Sample (meticals)	Full Sample (% of Revenue)
Gross Revenue	297,373,921	N/A	1,687,939,164	N/A
Operating Costs	320,778,690	107.87%	1,183,304,695	70.10%
Labor	107,009,715.93	35.98%	409,858,012.63	24.28%
Sales and Marketing	28,969,527	9.74%	62,765,089	3.72%
Food and Beverage	53,476,471	17.98%	202,864,612	12.02%
Supplies	6,095,727	2.05%	28,361,679	1.68%
Rent	6,838,746	2.30%	36,725,236	2.18%
Utilities	35,213,301	11.84%	101,515,903	6.01%
Repairs and Maintenance	14,090,741	4.74%	64,619,044	3.83%
Induced Corporate Social Responsibility (CSR)	3,165,000	1.06%	14,503,522	0.86%
Other Expenses	65,919,459	22.17%	262,091,597	15.53%
Taxes (National & Municipal)	59,025,052	19.85%	470,525,979	27.88%
Operating Profit	(82,429,821)	-27.72%	34,108,490	2.02%

Source: Study Team Analysis

POTENTIAL IMPACTS OF DUTCH DISEASE

Table 16 shows shifts in profitability in line with likely impacts of Dutch disease for the leisure value chain.

Exchange rate effect: Metical appreciation would affect firm profitability through the same channels as observed in the business and corporate sample. Nominal appreciation in the near-term will have ERPT effects on both input purchases and on sales but, as noted in Section 3, its effects in reducing sales (due to loss in price competitiveness) will exceed the effects of reducing input costs (lower cost of imported food and beverage for example). Over time as wages become less sticky and real appreciation effects are reflected in inter-sectoral compensation differentials (between tradable and non-tradable), leisure tourism employees, or at least those with higher skills, will migrate towards higher-paying industries. This will spur leisure segment firm wages to rise, and productivity and quality of labor to fall (assuming it is the most productive employees who are able to successfully obtain work in other industries), increasing operating costs and worsening the financial picture (see Pessimistic Policy Scenario, Table 16).

It is also important to note one critical economic characteristic of the leisure tourism value chain not addressed by these model runs – that of the relatively elastic demand its firms face for their services. Unlike the corporate value chain firms, whose clientele usually have to travel due to business needs, leisure tourism firms are far more exposed to the effects of sudden shifts in demand due to changes in price competitiveness. Ironically, were leisure value chain firms currently more competitive and their prices more appealing to international consumers, appreciation would have even greater effect on profitability, as there would be a larger volume of customers potentially at risk of taking their business elsewhere. Given the poor health of the value chain as sampled, however, it is clear there is little current business to be affected. For this reason, the forecasts here represent a lower estimate of the financial effects of exchange rate appreciation than would be seen in healthier leisure tourism industries.

Policy Reform Effects: If the same policy issues considered above in the corporate value chain were resolved or improved, the effects of currency appreciation and resulting increase in labor costs on the leisure segment could be partially offset. The total accrued profit from these reforms is presented in Table 15:

TABLE 15: MODEL ADJUSTMENTS FOR OPTIMISTIC POLICY SCENARIO, LEISURE SAMPLE

Variable	Value of Profit Realized by Sample in Optimistic Policy Scenario (meticals)
Labor issues improved	19,178,251
Unreliability of air transport	1,705,952
High price of air transport	949,183
Corruption and inaction by local police force	3,840,068
Political strife within Mozambique	8,318,209
Restrictiveness of visa policy for visitors	599,328
Costs of providing security for visitors	13,548,210

Source: Study Team Analysis

Unlike the corporate and business tourism value chain, these reforms alone would not be enough to overcome the dire financial performance of leisure tourism businesses, they would only reduce the rate at which those in the leisure segment are losing money, as illustrated in Table 16. These effects would be amplified under a 50% currency appreciation scenario.

TABLE 16: SCENARIO ANALYSIS: LEISURE TOURISM AND THE IMPACTS OF DUTCH DISEASE

	No ER Appreciation	9.6% ER Appreciation	50% ER Appreciation
Pessimistic Policy Scenario			
Total Revenue	297,373,921	292,520,779	272,097,138
Operating Costs	320,778,690	323,558,918	345,346,493
Taxes	59,025,052	58,284,218	55,627,058
Operating Revenue (meticals)	(82,429,821)	(89,322,357)	(128,876,413)
Operating Revenue (% of Revenue)	-27.72%	-30.54%	-47.36%
Optimistic Policy Scenario			
Total Revenue	518,426,143	509,966,410	474,365,037
Operating Costs	520,645,111	520,011,259	527,632,055
Taxes	97,305,571	95,925,471	90,538,851
Operating Revenue	(99,524,539)	(105,970,320)	(143,805,870)
Operating Revenue (% of Revenue)	-19.20%	-20.78%	-30.32%

Source: Study Team Analysis

5. MAIN FINDINGS AND KEY MESSAGES

This report has reviewed factors affecting the competitiveness of two tourism value chains in Mozambique, the corporate segment and the leisure segment. Although the emphasis of the report is on cost analysis, qualitative dimensions such as productivity, quality, value-added service, and risk management were also considered. Nevertheless, because of shifting market dynamics, and the fact that Mozambique's tourism product is underdeveloped relative to international standards, competitiveness is mostly a cost issue, and one which is determined throughout the different stages in the value chain.

Like other industries, tourism produces products that vary in their competitiveness in international markets. One of the key findings of this study is that there is a difference in competitiveness between corporate, and leisure, tourism firms and in the products they offer. The corporate tourism value chain offers the best prospects for remaining competitive vis-à-vis the onset of Dutch disease. However that said, even the corporate tourism segment is not highly profitable and will become less so under DD.

The Tourism Divide: Although the Mozambican tourism industry has often been treated as monolithic, this study has identified two very different value chains in distinct situations in respect of their current and long-term competitiveness. The financial health of the corporate and business tourism sector has improved due to the natural resource boom. However, this same boom has reduced the sense of urgency at government level to remove longstanding barriers to competitiveness which are preventing the whole sector from growing. Lessons learned from other countries suggest that policy reform intended to open up markets, improve the quality of human resources and develop unique tourism products is the best way to guarantee continued financial success in the face of the economic pressures imposed by a natural resources boom.

In the case of the firms surveyed, it is clear that those active in the leisure tourism value chain are mainly locally owned, smaller in size, and lack easy access to international capital markets. They are currently vulnerable to financial stress and this would worsen under DD.

The inelasticity of demand for corporate and business travel makes the future for firms in that value chain somewhat brighter. However, profitability rates are low compared to international averages and highlight the additional cost of doing business resulting from operating environment constraints. There is evidence that companies operating in Mozambique are increasingly choosing to provide executives and workers with accommodation rather than using hotels, suggesting that there is finite tolerance for price increases in this segment, which suggests that the current growth in the segment is potentially unstable.

The Real Costs of Labor: The financial analysis undertaken for this study identified the cost of labor as the most significant driver of firms' profitability. Labor costs are high as a result of the low productivity rather than as a factor of actual wages paid. Mozambican hotels have, on average, twice as many employees as hotels in other parts of the world with similar occupancy rates. Firms operating in the leisure tourism value chain are particularly affected while firms in the corporate value chain present rates of employees per room that are more aligned with international best practice. Increases in the cost of labor (resulting from DD) would significantly affect the sector. Even if all other barriers to competitiveness were removed, without changes in the cost of labor, firms will see their ability to compete restricted.

The Cost of Security: The combined effects of (perceived and actual) violence and corruption represent over 41 million meticals of foregone profit to the sampled firms, making it the most burdensome opportunity cost measured in this study. Two conclusions are significant. Firstly perceptions of the impacts of corruption are not reflected in evidence. The quantitative assessment found that police corruption represents "only" 8% of the overall value of all foregone profit in this category. The other components such as internal conflict, and the need for firms to provide their own security, were estimated to be valued each at more than five times that of police corruption. This suggests that while corruption is a very visible hindrance, other more indirect impacts of the lack of security are more harmful to business' bottom line.

A second conclusion is that while these constraints contribute to substantial inefficiencies, relieving them will not off-set the negative effects of Dutch disease. Estimates from the model show that even if these constraints were lifted completely, a mild appreciation of the ER by 11.6% would reduce the sample's operating profit to zero.

The Costs of the Air Transport Monopoly: Unreliable logistics is a major challenge and the air transport situation is directly responsible for unrealized profit of 16 million meticals for surveyed firms. However, the most significant inhibitor of visitor growth is not the cost of air transportation but rather the unreliability of flights. Reservations canceled as a result of flight unreliability represented unrealized profits of almost 14.8 million meticals while the profit foregone due to the cost of airfares represented less than one tenth this amount (1.23 million meticals). While wholesale reform of the aviation sector might be unrealistic, improvements in the air transport logistics offer should be a viable goal that could have a significant positive effect on the overall cost competitiveness of the sector. Nevertheless, it is important to highlight that these improvements alone would not suffice to entirely protect the industry from the onset of Dutch disease.

The Effects of Visa Policies: The restrictiveness of Mozambique's visa policies is a clear hindrance to tourism competitiveness, yet at the same time reform in this area cannot be expected to off-set Dutch disease effects on its own. The current cost of the visa policy is 25.9 million meticals in foregone, pre-tax profit – representing 31% of the total forgone by the sampled firms in 2013. Setting aside Dutch disease specifically, comparison of the partial effects of visa policy reform also shows that benefits would accrue disproportionately to larger firms catering to international tourists¹⁹. This does not mean that visa policy reform would be inconsequential. But if not combined with targeted reforms addressing other key constraints, liberalization will at best provide marginal benefits to large, well-established firms without providing meaningful protection from Dutch disease effects to smaller firms.

5.1. KEY MESSAGES

The tourism sector is currently struggling, particularly in the leisure segment, which is the segment offering the best chance for small, local firms to develop. Under a Dutch disease scenario leisure tourism in Mozambique would all but cease to exist. It would be completely nonviable. Corporate tourism currently fares a little better. However, under a Dutch disease scenario this currently profitable segment would also struggle to compete and survive.

The following messages are designed to assist CTA in discussing key policy proposals which will assist the tourism sector now, as well as in the future.

- **Improving Labor Productivity.** The importance of labor cost and quality for the overall competitiveness of the tourism industry cannot be understated. The economic benefits derived from a more productive labor force will be the single most critical factor to enable firms to increase their competitiveness – regardless of whether or not Dutch disease effects materialize. It is therefore important to develop a comprehensive strategy to improve the productivity of staff in the tourism sector through policy reform and training initiatives. The financial model discussed above allows for identification of three specific activities which would improve labor productivity and reduce cost.
- **Increase in-house training for hotel staff by 1% of total operating costs.** Currently, the firms in the survey sample invest 8.3 million meticals (or 0.7% of total operating costs) in training, equivalent to approximately 125 dollars per employee per year. Firms operating in the corporate tourism value chain tend to spend less since most are located in urban areas where skilled staff is easier to find. Firms in the leisure tourism value chain invest an average of 143 dollars per employee per year as they tend to be located in rural areas with less access to skilled staff. However, both value chains invest significantly less than hotels in other destinations.

¹⁹ C2Corporate firms (mean annual revenue of 92,704,350 meticals) would stand to realize the 97.69% of the 25,941,933 meticals estimated in forgone profits to the total sample. Leisure firms (mean annual revenue of 21,240,994 meticals) would stand to receive the remaining 2.31% in unrealized profit. A comparison of the target markets for the corporate and leisure value chains (Figures 7 and 13, respectively) further illustrates this finding.

TABLE 17: TOURISM FIRMS' INVESTMENT IN EMPLOYEE TRAINING, 2013

Country	Average Expenditure in Training per Employee per Year
Mozambique (Full Sample)	\$125
<i>Leisure Value Chain Sample</i>	\$143
<i>Corporate Value Chain Sample</i>	\$113
Rwanda	\$200
Australia	\$514
United States	\$955

Source: Study Team Analysis

Increasing training costs by 1% (or 11.8 million meticals) would bring the average expenditure in training per employee up to 305 dollars, which is more in line with international best practice. Extrapolating from the model, an increase of 1% in training budgets should have a positive effect (1.6% increase) on firm profits as a percentage of total revenue.

- Remove restrictions on hiring foreign workers. Current regulations are based on a quota and are intended to protect national staff. However there is a shortage of skills in the country and this particularly affects the tourism sector which needs not only to increase skills of local staff but to have highly skilled and qualified staff available during the time it takes to bring local staff up to the requisite levels. The model shows that removing restrictions on the hiring of foreign skilled workers would result in firm operating costs increasing by 2.8%, as staff with higher skills tends to be more expensive. This increase would however be off-set by revenue increases of an estimated 6% resulting from increased productivity.
- Make labor regulations in the sector more flexible. The labor law uniformly applies to all sectors and prevents tourism employees from working shifts longer than 8 hours. This therefore obliges firms to both increase the number of shifts and the number of employees in order to provide acceptable levels of service at all times.

The current legal framework also fails to take account of the flexibility required by the hospitality industry to deal with seasonality or periods of inactivity.

A comparative lesson can be drawn from the United States' hotel industry, which presents an interesting example of labor market flexibility in meeting the dynamic needs of firms. Rather than tackling issues of wages or taxes, the American Hotel and Lodging Association (AHLA) lobbied the government to incorporate legislation permitting alternative scheduling in the hospitality sector. The main tenets of the regulations can be found in Table 18.

TABLE 18: ALTERNATIVE SCHEDULING IN THE AMERICAN HOSPITALITY INDUSTRY

Alternative Scheduling in the American Hotel Industry	Flexible Work Hours or Flexitime. Allows for more efficient allocation of workers in different departments
	Compressed Work Schedule. Allows for longer shifts during peak seasons.
	Job Sharing. Reduces the need for full-time staff during low seasons.

Source: AHLA

The model suggests that surveyed firms' profitability would increase to 4% of total revenue (or an additional 34 million meticals per year) if these reforms were to be implemented:

TABLE 19: PARTIAL EFFECTS OF SELECT LABOR POLICY IMPROVEMENTS, FULL SAMPLE

Select Policy Reforms	Profit in Baseline (% of Revenue)	Change from Baseline due to Policy Reform (% of Revenue)	Change from Baseline due to Policy Reform + 9.6% ER Appreciation (% of Revenue)	Change from Baseline due to Policy Reform + 50% ER Appreciation (% of Revenue)
1) Labor Costs Decrease by 10% Through Improved Scheduling	34,108,490 meticals (2.02%)	29,624,804 meticals (86.85%)	9,697,548 meticals (28.43%)	-99,296,676 meticals (-291.12%)
2) Restrictions Removed on Hiring of Foreign Workers		29,668,548 meticals (86.98%)	8,029,828 meticals (23.54%)	-113,156,484 meticals (-331.75%)
3) Firms Increase Training Expenditures by 1% of Total Operating Costs		550,160 meticals (1.61%)	- 19,719,234 meticals (-57.81%)	-132,945,913 meticals (-389.77%)

Source: Study Team Analysis

These impacts would vary significantly between firms in the corporate, and leisure, value chains, particularly in the face of Dutch disease. Analysis of the leisure segment suggests that while these policy reforms could help firms turn around their present situation, and remain viable in the context of a moderate metical appreciation, faced with acute currency appreciation these reforms would only minimize operating losses. Tables 20 and 21 illustrate the different impacts of these reforms on profitability of participating firms:

TABLE 20: PARTIAL EFFECTS OF SELECT LABOR POLICY IMPROVEMENTS, CORPORATE SAMPLE

Select Policy Reforms	Profit in Baseline (% of Revenue)	Change from Baseline due to Policy Reform (% of Revenue)	Change from Baseline due to Policy Reform + 9.6% ER Appreciation (% of Revenue)	Change from Baseline due to Policy Reform + 50% ER Appreciation (% of Revenue)
1) Labor Productivity Increases, such that Labor Costs Decrease by 10%	106,108,596 meticals (7.63%)	21,877,761 meticals (20.62%)	8,128,044 meticals (7.66%)	-76,111,528 meticals (-71.73%)
2) Restrictions Removed on Hiring of Foreign Workers		16,862,997 meticals (15.89%)	2,151,468 meticals (2.03%)	-89,179,716 meticals (-84.05%)
3) Firms Increase Training Expenditures by 1% of Total Operating Costs		404,525 meticals (0.38%)	-13,599,179 meticals (-12.82%)	-100,969,955 meticals (-95.16%)

Source: Study Team Analysis

TABLE 21: PARTIAL EFFECTS OF SELECT LABOR POLICY IMPROVEMENTS, LEISURE SAMPLE

Select Policy Reforms	Profit in Baseline (% of Revenue)	Change due to Policy Reform (% of Revenue)	Change due to Policy Reform + 9.6% ER Appreciation (% of Revenue)	Change due to Policy Reform + 50% ER Appreciation (% of Revenue)
1) Labor Productivity Increases, such that Labor Costs Decrease by 10%	-82,429,821 meticals (-27.72%)	11,189,494 meticals (13.57%)	4,475,989 meticals (5.43%)	-33,269,844 meticals (-40.36%)
2) Restrictions Removed on Hiring of Foreign Workers		7,981,128 meticals (9.68%)	541,292 meticals (0.66%)	-42,532,364 meticals (-51.60%)
3) Firms Increase Training Expenditures by 1% of Total Operating Costs		581,404 meticals (0.71%)	-6,258,485 meticals (-7.59%)	-45,590,985 meticals (-55.31%)

Source: Study Team Analysis

- Policy vs Firm-Level Reform. Any response to the current situation in the sector as well as preparation for potential Dutch disease must include a combination of policy and firm-level reforms. Policy reform must ensure that the efficient arrival and mobility of visitors results in increased revenue for tourism business, while reforms at firm level will improve business profitability.

The example above of labor reform is one example of how the modeling tool developed by the study team can be used by the private sector to prioritize barriers to competitiveness. While theoretical approaches to competitiveness are important, CTA should primarily be concerned with ensuring the financial health of businesses. It is our hope that this study is of benefit as they work towards achieving that goal.

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CHAPTER 2.5
**MOZAMBIQUE'S NATURAL
RESOURCE BOOM:
WHAT POTENTIAL IMPACTS ON
THE COMPETITIVENESS OF THE
MANUFACTURING SECTOR?**

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EXECUTIVE SUMMARY

Mozambique's non-extractive, non-megaprojects manufacturing sector is still small and can be characterized as "low tech." Moreover, signs of structural transformation of Mozambique's economy are few. Shares of total GDP contributed by agriculture, industry, and services have not changed significantly in the last ten to twelve years, nor has there been any significant increase in the share of total employment contributed by manufacturing. Within industry, however, the share of manufacturing's non-extractive sectors has grown from 19 (2008) to 35 percent (2013).

This study of the factors driving (or inhibiting) the competitiveness of Mozambique's manufacturing sector and thus the sector's potential vulnerability under natural resource boom conditions focuses on the part of manufacturing that is not expected to expand as a direct result of the boom. Specifically, firms in the agriculture/beverages and "other" manufacturing sectors, outside of mining and manufacture of mineral and metal goods, were interviewed.

In other countries, natural resource booms have created strong increases in demand for the local currency and, through increased spending, upward pressure on domestic prices. This in turn has led to appreciation of the currency and an upward shift in relative prices of non-tradables (i.e. labor, real estate, construction, transportation, logistics), making them more expensive, in local currency, to the detriment of tradables (i.e. agriculture, tourism, and manufacturing). The result of this set of impacts, known as Dutch disease, unless countered by specific monetary or structural measures, can sharply reduce incentives to produce for export or substitute for imports competitively. Virtual elimination of export agriculture and/or manufacturing can ensue. What will happen in Mozambique?

The question is of particular importance because revival or promotion of export-oriented, labor-intensive manufacturing has been an objective of numerous government policy statements over the last twenty years. The most recent of these is the National Development Strategy (Estratégia Nacional de Desenvolvimento, or ENDE), approved by the Council of Ministers in 2014. Manufacturing is valued for its potential contributions to structural change, diversification, generation of employment, attraction of foreign investment, technology transfer, and productivity enhancement.

This study interviewed firm managers from small- and medium-sized enterprises and a few large companies. Firms also differed by input sourcing strategies, processing, products, ownership, capital versus labor intensity, product standardization versus differentiation, and market orientation. These characteristics allow us to probe how vulnerable different categories of firms believe themselves to be – and how vulnerable the authors' analysis suggests them to be – if the metical were to strengthen significantly as a result of the boom. Moreover, the metical's current appreciation vis-à-vis the currency of one of Mozambique's major trading partners, the South African rand, provides an "experimental" perspective on firms' commercial prospects in the face of a stronger metical.

Confirming the findings of the Ministry of Development and Planning's 2012 survey of manufacturing, firms in our sample face a range of constraints in trying to do business in Mozambique. Few attempt to export. Those that do export minimally processed goods, such as wood pavers for more refined value-added processing elsewhere, or sell value-added processing labor to assemble goods for sale into South Africa, such as basic garments, for which product

design, input sourcing, and merchandising planning are all performed outside of Mozambique. Even those in the agro-processing sector are, by and large, producing goods for the domestic market. A companion to this study analyzed several agricultural commodities, including one agro-processed good, cotton lint (Calima et al. 2014). Uncertainties regarding the availability of electricity, the stability of licensing fees, port fees and processes, and other laws and regulations affecting their businesses are common concerns across many firms. Concerns were expressed about local firms' inability to face competition from foreign suppliers. Complaints were also heard about minimum wages being out of line with labor productivity, especially when referenced against other countries. Boom pressures on road transport are already being felt, with road haulage capacity constraints and rising costs exacerbated in recent months by insecurities along the north-south road axis. With an extensive coastline, inter-port cabotage could be an alternative, but port management inefficiencies are said to take this option out of consideration.

The aggregate effect of these (and other) constraints to doing business in Mozambique already renders the non-extractives manufacturing sector fragile from a competitiveness point of view. Were the metical to appreciate significantly, imported raw materials and intermediate and final goods would be able to compete successfully, perhaps replacing Mozambican goods altogether. At the same time, efforts to foster exports would be frustrated, and those few firms already exporting would see their competitiveness eroded. A summary of potential impacts, by firm category, is presented in the matrix below and explained in the text that follows. Firm categories are distinguished primarily by the type/degree of differentiation of good produced and primary destination markets (domestic or foreign).

SUMMARY OF POTENTIAL DUTCH DISEASE IMPACTS BY FIRM TYPE

Manufacturing Firm Category			Overall Outlook in the Face of Dutch Disease		
Product Category	Destination Markets	Examples	Favorable	Ambiguous	Difficult
Aspirational Consumer Goods	Domestic	Brand-name foods, beverages	√		
Weakly Differentiated Goods + Strong Value-Added Services	Domestic	Intermediate goods, e.g. agricultural inputs, construction materials		√	
High Quality Consumer Goods	Domestic	Specialty consumer goods, e.g. foods, beverages, home goods		√	
Weakly Differentiated	Domestic	Basic foods, beverages			√
Local Value-Added Processing	Export	Clothing			√
Standardized	Export	Intermediate goods, e.g. threads, textiles			√

Source: Study Team Analysis

Some manufacturing companies operate in market segments that could potentially provide them some qualitative dimension of resilience against Dutch disease-induced pressures. The outlook is favorable for some capital-intensive firms that source most of their inputs internationally and produce “aspirational” consumer goods for the domestic market, i.e. goods that enjoy strong consumer brand loyalty. They will likely see their costs decrease, allowing them to maintain or grow market share even in the face of cheaper imports.

On the other hand, the Dutch disease outlook is ambiguous for other firms. To the extent that firms produce weakly differentiated products for the domestic market, cheaper imports could certainly undercut them in the Mozambican market. However, some of these firms strengthen their competitiveness in the local market by offering consumers additional value-added services – e.g. custom blending, cutting, shaping, etc. – that strengthen their competitive positions. New market entrants from abroad could mirror these good business practices, of course, but existing firms would already have an advantage in the market.

Another category of firms sources raw materials domestically for processing into high-quality consumer goods that are sold in the domestic market with little or no competition (at present) from foreign suppliers, due to the relatively small overall market size. Whether these firms will be faced with significant competition from foreign suppliers seeking to take advantage of lower costs to grow space in the local market is unclear.

The outlook under a Dutch disease scenario is likely to be difficult for several other firm categories. For firms that produce weakly differentiated and readily substitutable goods for the domestic market, or firms that export labor through value-added processing of imported inputs, or firms that export fairly standardized products into overseas markets, the market prospects under a natural resource boom scenario looks difficult, or challenging. Imported substitute products will easily undercut the locally produced goods. Producers of labor-intensive, value-added processed, standardized goods will find that a stronger metical will make their products more expensive, expressed in rand or euro or U.S. dollar terms. These firms are already under pressure. Examples of labor-intensive, export-oriented manufacturing in Mozambique are rare. A few are found in the garment sector, supplying into the South African market. As described in the body of the report, this is not the same story of garment industry success found in lower cost, more highly productive South and Southeast Asian manufacturing platforms, who supply clothing competitively into European and North American markets.

In summary, Dutch disease – should it emerge as a consequence of the natural resource boom – will make things even harder for most manufacturing companies in Mozambique.

Appreciation of the metical and upward shifts in relative prices of non-tradables will likely frustrate or negate government’s efforts (or intended policy objectives) to industrialize. Without careful macroeconomic management and strategic investments to improve productivity and the business environment, Mozambique could end up with just a few non-extractives industry manufacturing firms, not the full-blown industrialization targeted in the newly adopted development plan, the ENDE.

Appreciation of the metical and the real exchange rate has both geographic and temporal distributional effects. While in the short run, a metical appreciation favors predominantly urban, middle-class consumers who will be able to purchase imported food and consumer goods at lower prices, this makes it more difficult for rural producers of agricultural products to sell their produce. And over time the availability of cheaper imports frustrates efforts to industrialize, i.e. to manufacture goods in whose production Mozambique would have a comparative advantage at a less strongly appreciated exchange rate. This in turn frustrates the economy’s ability to create manufacturing jobs and achieve expected “learning by exporting” gains.

In light of Mozambique’s broad welfare and development goals, this study’s findings are sobering. Firms with the most favorable outlook under a possible Dutch disease scenario are those that create the fewest jobs, being capital-intensive in nature and sourcing raw materials internationally rather than from local suppliers. On the other hand, companies that are labor-intensive, source locally, and export likely face the most difficult outlook under a Dutch disease scenario.

In order to keep such outcomes at a distance and give Mozambique's manufacturing sector and industrialization plans a better chance of success, it is important both (1) to mitigate the severity of Dutch disease and (2) to help firms overcome its impact through a focus on productivity and international competitiveness. The severity of an exchange rate appreciation can be mitigated through measures such as managing real exchange rates to minimize currency appreciation and resource re-allocation, using fiscal and monetary tools described elsewhere (Biggs 2012; Ross 2014). Efforts to boost productivity and international competitiveness include measures to improve the overall business environment, attention to international competitiveness of minimum wage levels, addressing infrastructure bottlenecks and inefficiencies, and strategic investments to improve productivity in traditional sectors of the economy.

In the short-run, it is not possible to “balance” the aim of industrialization with the desire to ensure benefits for urban consumers, rather these are trade-offs with important distributional and longer term consequences. Under an appreciated metical scenario, the longer term consequences for the economy's structural transformation are extremely pessimistic. The longer term benefits of an industrializing, structurally transforming, economy can only be realized if policymakers keep that longer term vision in mind as they manage the real exchange rate and spend natural resource gains wisely in the coming few years in order to stimulate a more productive and more efficiently operating economy for the generation to come.

INTRODUCTION

This report is part of a suite of studies conducted by the Support Program for Enterprise and Economic Development (SPEED), a joint activity undertaken with the Confederação das Associações Económicas de Moçambique (CTA) and supported by the U.S. Agency for International Development. Earlier work by SPEED identified the potential for the natural resource boom in Mozambique to have negative macroeconomic consequences for Mozambique's traditional tradables sectors (Biggs 2011, 2012; Webber 2013).

A natural resource boom can lead to negative economic effects in the following ways:

- A sharp increase in natural resource exports may create upward pressure on the metical if export revenues – or some portion thereof, as in taxes owed to the state – are converted into meticals (exchange rate effect).
- With increased revenues, domestic spending by government or private actors may be facilitated (spending effect).
- With increased spending, the prices of domestic, non-tradable goods and services (e.g. land, skilled labor, construction services, housing, logistics,...) may be pushed up (real exchange rate effect)¹.
- Imports become less expensive in domestic currency terms and exports become more expensive in foreign currency terms.
- As relative prices are skewed in favor of non-tradables, the relative profitability of non-tradable activities increases and the relative profitability of tradable activities falls.
- This increases incentives to reallocate resources into the non-tradable sectors of the economy and away from traditional tradable sectors (re-allocation effect). In some cases, de-industrialization or abandonment of commercial agriculture may ensue.

This set of impacts has been termed “Dutch disease,” named for the decline of the manufacturing sector in the Netherlands after discovery of a large natural gas field in 1959. The impacts of Dutch disease on economies experiencing natural resource booms have been widely researched (see Box 1 for a summary). Following an extensive survey of the literature, IMF analysts concluded that “...Dutch disease does exist – as the real exchange rate appreciates, there is factor reallocation, and production switches away from manufacturing” (Magud and Sosa 2010, 21).

¹ Note that if the exchange rate is fixed, inflation may ensue (Frankel 2012).

However, the impacts on growth are difficult to isolate, as almost always Dutch disease occurs at a time of economic boom and change. The severity of Dutch disease is also difficult to predict – depending partly on policy measures government may take, and partly on how fast and sharp the boom is. Growth is not the only factor – as often growth in GDP can occur without concurrent increases in employment and therefore in the welfare of the population. A possible decline in manufacturing is of concern not just for its impact on growth, but on job creation and diversification of the economy, especially in a situation where the boom is caused by non-renewable resources, that will eventually be exhausted – as in the case of Mozambique.

Natural resource boom effects also have distributional impacts, seen when focus is shifted from manufacturing firms to consumers of manufactured goods. A stronger metical would make imported goods cheaper, relative to home-produced goods. This is a benefit to consumers, especially a rising middle class with increased disposable income, whether they seek to shift from maize meal to rice or from domestic to imported beverages.

Box 1: Overview of Dutch Disease Experiences Elsewhere

Natural resource boom experiences elsewhere suggest the sector's potential vulnerability to currency appreciation. A natural gas boom in the Netherlands in the early 1970s led to a nearly 20 percent appreciation of the guilder in six years, industrial stagnation, and a 16 percent drop in manufacturing employment over the same time period (Economist 1977). Nigeria's oil booms during the 1970s and 80s, on the other hand, saw manufacturing output maintained through costly government protection, while export agriculture (timber, groundnuts, oil palm) collapsed (Bevan, Collier, and Gunning 1999). Exports of oil from Yemen in the 2000s led to a decline in manufacturing's share of GDP from 19 to 7 percent (Abu-Ismael and McKinley 2008, quoted in Hailu et al. 2011). Mexico's oil boom in the 1970s/80s was also followed by steady contraction of its manufacturing sector; yet Indonesia avoided a collapse in manufacturing through state intervention, along with policies such as exchange rate devaluation and pro-export regulation (Usui 1997; Bevan, Collier, and Gunning 1999). Angola's manufacturing sector remains a small share of GDP, crowded out by real exchange rate appreciation (World Bank 2013).

To fully appreciate the potential impacts of the natural resource boom on Mozambique's economy, it is necessary to go beyond aggregate, theoretical analysis and look at the potential impacts on different sectors of the economy and even different value chains or typologies of firms within these sectors. Sectoral studies have been undertaken to probe the potential impacts of a natural resource boom on Mozambique's labor markets (Salinger and Ennis 2014a), and on traditional, tradable sectors of the economy, i.e. agriculture (Calima, Dengo, Moamba, and Salinger 2014), manufacturing (this report), and tourism (Baca, Kozumbo, and Sarmento 2014)²:

- Labor markets are likely to be most affected by natural resource boom pressures at the high-skill end of the spectrum, as demand for both skilled professionals and skilled technicians will rise. Demand for low-skill labor, such as rural workers seeking to diversify or shift livelihoods out of agriculture, is unlikely to be directly affected. However, if natural resource boom-induced government spending increases sharply, and if that spending is directed to labor-intensive public works projects, for example, then migration of rural labor into construction projects could lead to upward pressure on rural wages.
- Mozambique's agricultural sector is potentially vulnerable to metical appreciation in some traditional commodities. Rice is already unprofitable, if all labor costs are quantified, at current yields, world prices, and exchange rate. If the exchange rate were to strengthen significantly, the economic profitability of rice, cotton, and soybeans could all be threatened. Yield increases and decreased logistics costs could help to remediate some of the threat to competitiveness of metical appreciation.

² For copies of this work, see www.speed-program.com.

■ The tourism sector in Mozambique is another traditional “export industry,” earning foreign exchange through sale of tourism services to foreign consumers. Early analysis suggests that metical appreciation would threaten the competitiveness of business/corporate, island, and coastal beach tourism, causing some firms to “de-formalize” or go out of business, leading to job losses and a weaker, less competitive tourism sector.

This study seeks to understand the potential impacts of a natural resource boom on non-extractive industry-related, non-megaprojects-related manufacturing in Mozambique. In order to proceed with analysis, we first need to define what is meant by “manufacturing” in Mozambique, as different organizations use different definitions; this also allows us to situate the traditional, non-extractive industry-related manufacturing in a broader economic context (Section 1). We also surveyed recent literature in order to understand how manufacturing has evolved in recent years and how government strategies seek to promote industry/ manufacturing (Section 2). Section 3 describes our sample, analyzes potential natural resource boom impacts by firm typology, and presents findings. Section 4 presents conclusions and key messages.

A number of hypotheses about manufacturing in Mozambique, competitiveness, and vulnerability to Dutch disease emerged during the course of our interviews with firms. In addition to consideration of key cost drivers, factors that emerged that may affect the resilience or vulnerability of the firm to the macroeconomic and relative price effects of natural resource booms include: the kind of good produced – highly standardized versus highly design-intensive, the degree to which the firm is involved either in exports or imports of inputs or final goods, the degree of labor- or capital-intensity, and the extent to which a firm’s competitive success depends on mastering non-cost dimensions of doing business in Mozambique. Thus in the analysis we characterize value chains not by what they make per se, but rather by structural and behavioral characteristics that define the firms, bear directly on vulnerabilities to currency value and relative price changes, and may be in common with firms in other divisions of the sector.

1. ECONOMIC IMPORTANCE OF MANUFACTURING

Our focus on manufacturing is important for several reasons. First, as one of the traditional tradables sectors of an economy most vulnerable to resource reallocation in a natural resource boom scenario, manufacturing is thus an important lead sector to watch for changes. Second, a strong and growing manufacturing sector, especially when connected with global value chains, is an important indicator of an economy that is modernizing. Third, growth in manufacturing brings positive multiplier effects in terms of service sector value-added and employment growth, as well as spread effects of innovations borne of research and development in manufacturing. Finally, unlike the extractive industry whose natural resources have a finite horizon, manufacturing can grow, become more sophisticated, and adapt over time, thereby securing growth and employment opportunities for generations to come.

Stylized facts highlight the structural transformation experienced by countries as they grow (Kuznets 1971; Teal 2011; UNIDO 2013). Over time the share of value-added derived from agriculture normally falls, while the shares of industry and, subsequently, services normally rise. Changes are induced in the scale of production, from personal enterprise to impersonal organization of firms, and in the occupational status of labor, from informal to formal employment.

Benefits of this structural transformation are important in both employment creation and fostering of innovation. Manufacturing creates not only direct employment in production, but also indirect employment in services sectors that support it. The McKinsey Global Institute notes that the distinction between manufacturing production and services has blurred. An increasing share of growth is in the areas of research and development, marketing and sales, and customer support that underpin manufacturing per se. In the United States, service-type activities account for 30-55 percent of total manufacturing employment (Manyika et al. 2012, 7). This service-related side of manufacturing, with both low- and high-skill jobs, is also the more dynamic segment of the manufacturing sector. Even as a small share of the overall economy, manufacturing is also crucial as a key investor in innovation. As manufacturing firms invest in research and development to devise new inputs, products, technologies, methods of production, etc., the spillover effects of the adopted innovations lead to productivity gains elsewhere in the economy.

1.1. DEFINING MANUFACTURING IN MOZAMBIQUE

In order to assess the impact of a natural resource boom on manufacturing, it is important to be clear about definitions. In general, the term “industry” encompasses mining, manufacturing, construction, and utilities. Mozambique’s National Statistics Institute (INE) defines “extractive and processing industries” using two sections of the United Nations’ International Standard Industrial Classification (ISIC, rev. 4): mining and quarrying (ISIC divisions 05-09) and manufacturing (divisions 10-33)³.

TABLE 1: MOZAMBIQUE’S EXTRACTIVE & MANUFACTURING INDUSTRIES

ISIC Div.	Description	ISIC Div.	Description
B. MINING AND QUARRYING			
05	Mining of coal & lignite	08	Other mining & quarrying
06	Extraction of crude petroleum & natural gas	09*	<i>Mining support service activities</i>
07	Mining of metal ores		
C. MANUFACTURING			
10	Food products	22	Rubber & plastics products
11	Beverages	23	Other non-metallic mineral products
12	Tobacco products	24	Basic metals, including aluminum ingots
13	Textiles	25	Fabricated metal products, exc. machinery & equipment
14	Wearing apparel	26*	<i>Computer, electronic, & optical products</i>
15	Leather & related products	27	Electrical equipment
16	Wood & products of wood & work, except furniture; articles of straw & plaiting materials	28	Machinery & equipment, not elsewhere classified
17	Paper & paper products	29	Motor vehicles, trailers, and semi-trailers
18	Printing & reproduction of recorded media	30*	<i>Other transport equipment (ships, boats, railway, air, spacecraft, military vehicles, motorcycles, bicycles, other)</i>
19*	<i>Coke & refined petroleum products</i>	31	Furniture
20	Chemicals & chemical products	32	Other manufacturing (jewelry, musical instruments, sporting goods, games & toys, medical & dental equipment)
21*	<i>Pharmaceuticals, medicinal chemical & botanical products</i>	33*	<i>Repair & installation of machinery & equipment</i>

*Note: * Not included in INE definitions*

Source: United Nations, ISIC, rev. 4 (New York, 2008); INE (2014)

³ ISIC rev. 4 divisions 9, 19, 21, 26, 30, and 33 are either not relevant today in Mozambique, or are not large enough to be tracked separately by INE. For example, Division 05 was just added to Mozambique’s statistics as a separate mining industry category in 2014.

A recent World Bank study on manufacturing in Africa differentiates between “low tech” and “high tech” manufacturing (Dinh et al. 2012, 26). The former encompasses food and beverages, leather, wood processing and products, simple metal products, textiles, and garments, whereas the latter includes machinery; metal, non-metal, plastics, electronics, chemical, and pharmaceutical products; vehicles; and parts. Sub-Saharan Africa’s comparative advantage is in light, “low tech” manufacturing, in countries where labor costs are low⁴. By “light manufacturing in Africa,” the Bank is referring to “a few medium-size formal firms providing products to niche or protected markets and [] a vast number of small, low-productivity informal firms providing low-quality products to the domestic market” (Dinh et al. 2012, 2). This same characterization applies to Mozambique.

2. MANUFACTURING IN MOZAMBIQUE: DATA & POLICIES

Manufacturing in Mozambique has been influenced by the country’s history and political shifts, from which it has yet to fully recover. In terms of absolute size, Mozambique was the 8th largest industrial producer in Africa at independence in 1975 (Biggs et al 1999), whereas in 2010 Mozambique’s manufacturing sector was 16th among sub-Saharan African countries. Yet in a relative sense, Mozambique’s 15 percent GDP share of manufacturing is among the highest in Africa. Only four African countries (Swaziland, Mauritius, Senegal, and Mozambique) are found among the world’s top 50 countries when ranked in order of the GDP share of manufacturing⁵.

However, the value of Mozambique’s extractive and industrial production grew 50 percent between 2010 and 2013, from 75.4 to 113.7 billion current meticals (see Table 2 for 2013 values). As the GDP deflator rose by almost 19 percent between 2010 and 2013, this represents a real increase of just over 30 percent. The size of Mozambique’s manufacturing sector is skewed by the Mozal smelter’s aluminum ingot manufacturing (ISIC division 24). However, the composition of manufacturing has evolved in the last six years (Figure 1). INE figures from the more distant past (1973-1997) show the discontinuous effect of Mozal’s launch in 2000, reflected in the surge in the relative importance of basic metals manufacturing by 2008 (Figure 1).



⁴ “Low” is a relative term. Wages should be considered both relative to wages for comparable industries and skill levels in other countries and relative to labor productivity. In this case, the World Bank is referring to low wages in Ethiopia, compared with those observed in Southern Africa. They compared cash wages of Ethiopia, Tanzania, and Zambia with the same in China and Vietnam. Average monthly cash wages for unskilled labor in manufacturing sectors varied significantly among the three African countries: 35-53 dollars in Ethiopia, 80-130 dollars in Tanzania, and 157-208 dollars in Zambia, compared with 78-131 dollars in Vietnam and 197-278 dollars in China (all from 2011). The authors state that non-wage benefits are likely to be higher in Asia, especially China, than in Africa, thus widening the pay gap even further (Dinh et al. 2012, 26-31). By comparison, Mozambique’s minimum wage for industry in 2011 was 107 dollars, rising in 2014 (in nominal prices) to 147 dollars per month. Current monthly garment industry wages in Bangladesh (68 dollars) and Cambodia (100 dollars), for example, are lower than or comparable to those in Vietnam (100-128 dollars, depending on location). A comparison of 2011 monthly real wages for garment sector workers, corrected for costs of living across countries, is available in Worker Rights Consortium (2013).

In terms of labor productivity, Dinh et al. report that while China’s average productivity in polo shirts is more than double the level of Vietnam, levels in Ethiopia and Tanzania are on par with that of Vietnam. Levels of labor productivity in the manufacture of simple leather shoes were quite comparable across all five countries.

⁵ The importance of Mozambique’s manufacturing share places it above Zimbabwe (13.7), Namibia (13.4), Lesotho (12.8), South Africa (12.2), Malawi (11.9), Kenya (10.7), and Tanzania (10.2).

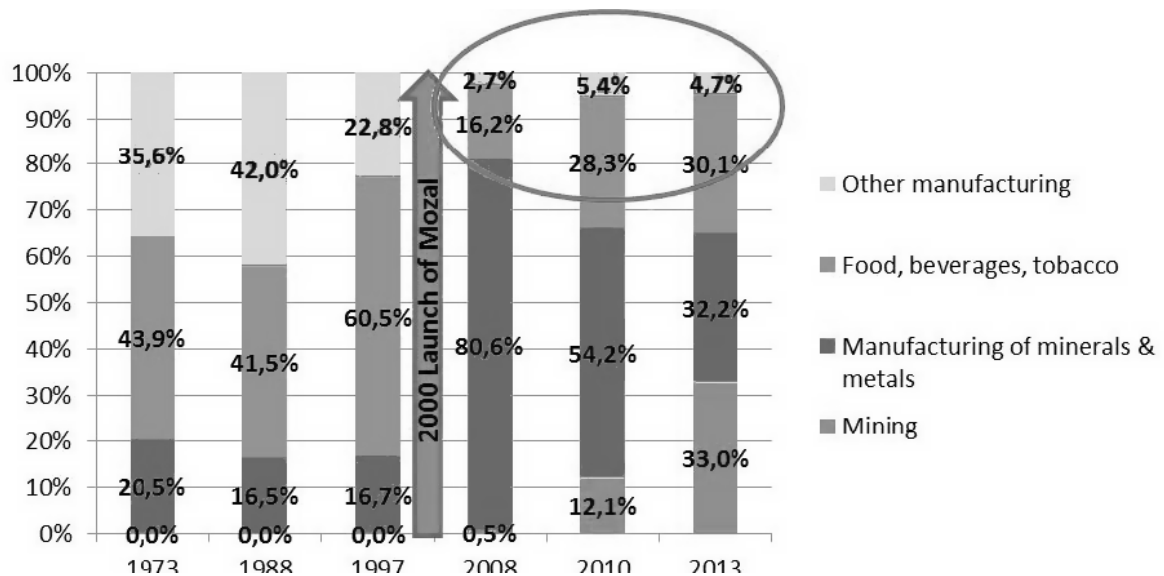
TABLE 2: VALUE OF MOZAMBIQUE EXTRACTIVE & PROCESSING INDUSTRY PRODUCTION, 2013

ISIC Div.	Sector	Value in Current Prices ('000 MT)	Share of Total
MINING			
5	Coal, not elsewhere classified	18,937,302	33.0%
6	Petroleum, gas	9,682,214	
7	Metallic ores	8,597,064	
8	Other extractive industries	250,594	
MANUFACTURING OF MINERALS & METALS			
24	Manufacture of basic, non-ferrous metals	31,872,360	32.2%
23	Other non-metallic mineral products	4,781,253	
MANUFACTURING OF FOODS, BEVERAGES, TOBACCO PRODUCTS			
10	Food products	18,619,454	30.1%
11	Beverages	9,877,564	
12	Manufactured tobacco products	5,726,462	
OTHER MANUFACTURING			
20	Chemical products	1,544,269	4.7%
13	Textile products	1,497,807	
22	Rubber, plastics products	564,287	
25	Fabricated metal products	389,280	
31	Furniture & mattresses	301,856	
17	Plugs, paper, paperboard	234,453	
16	Wood, cork, plaiting articles	94,052	
18	Printed materials	66,582	
15	Leather & articles	46,858	
27	Machines & equipment	45,249	
14	Clothing, pile, terry articles	28,156	
28	Electrical machinery	5,930	
29	Motor vehicles ⁶	3,688	
32	Other products	531,897	
TOTAL		113,698,629	

Source: INE (2014)

⁶ Although quite small today, this division may be due to expand, as Mozambique is reportedly beginning to manufacture vehicles (cars, sports utility vehicles, minibuses, buses) outside of Maputo. The result of an investment by China Tong Jian Investment Co., Ltd., Matchedje Motors' assembly plant, with an initial annual capacity of 30,000 vehicles, has just come online. One news report noted that 3,000 workers are expected to be employed over time, while another stated that 80 workers are currently employed, with as many as 500 jobs expected over the next several years.

FIGURE 1: COMPOSITION OF MANUFACTURING & EXTRACTIVE INDUSTRIES, 1973-2013



Note: Based on current value of production

Source: 1973-1997 from INE, presented in Biggs et al. (1999); 2008-2013 from INE annual yearbooks

Since 2008, Mozambique’s manufacturing sector appears to have grown more diversified. Mining has grown to one-third of industrial production. Outside of extractives and megaprojects, the food, beverages, and tobacco manufacturing category has also expanded from 16 to 30 percent of total value of industrial production; and even “other manufacturing,” a category including a range of products, is nearly twice as large a share in 2013 versus in 2008, growing from nearly 3 to nearly 5 percent). This study focuses on manufacturing outside of extractives, i.e. the food/beverages and “other manufacturing” categories. By and large, these are the “low tech” manufacturing sectors referred to by Dinh et al. In 2013 they represented about one-third of Mozambique’s total industrial production, highlighted by the red oval in Figure 1.

2.1. MOZAMBIKAN MANUFACTURING TODAY: FAR FROM STRUCTURAL ECONOMIC TRANSFORMATION

In 1999, Biggs et al. characterized the manufacturing sector as small, with production concentrated in a small number of industries, low inter-sectoral linkages, most firms sourcing inputs from abroad, and very few firms exporting. In some respects, not much has changed in the last fifteen years, and there are few signs of structural transformation, with GDP shares of agriculture and manufacturing quite stable since 2000. Manufacturing makes up 12 percent of exports, and employs 2.7 percent of the workforce (Jones and Tarp 2012, 26; see Table 3).

FIGURE 2: MANUFACTURING'S SHARE OF GDP, 1993 TO 2013

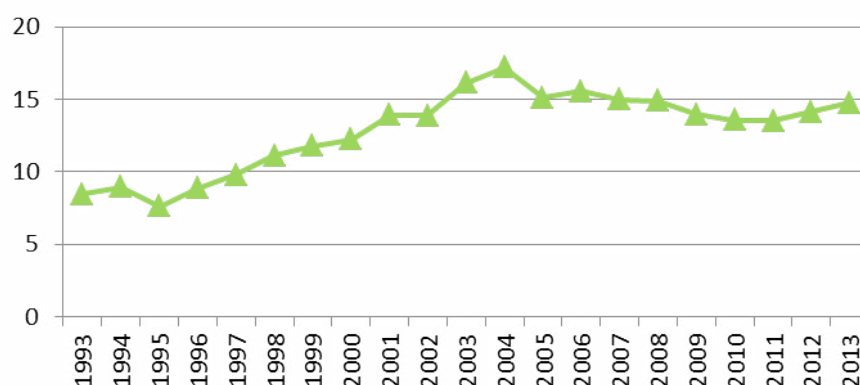
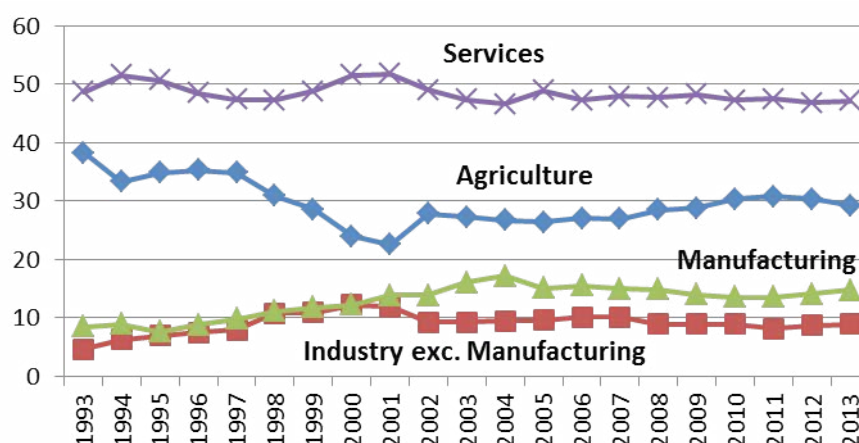


FIGURE 3: GDP SHARE OF MANUFACTURING, RELATIVE TO OTHER SECTORS, 1993 TO 2013



Source: World Development Indicators

Manufacturing is still concentrated in a small number of geographic areas, around large cities and towns, with nearly 40 percent of manufacturing firms concentrated in Maputo province, and a further 19 percent just in Sofala province. Thus nearly 60 percent of manufacturing firms are found in just two of Mozambique's ten provinces (MPD/DNEAP 2013).

Employment figures underscore the lack of transformation from a primarily agriculture-based economy to one in which industry would provide an increasing share of employment. Four-fifths of the population is still employed in agriculture, 8 percent in commerce (16.5 percent in all services), and only 2.7 percent in manufacturing (2.9 percent in industry, including mining) (Jones and Tarp 2012)⁷.

⁷ By way of comparison, the shares of employment in agriculture, industry, and services in 2010 were 46 percent, 21 percent, and 33 percent, respectively, in lower middle-income countries, and 4 percent, 22 percent, and 74 percent in high-income countries (World Development Indicators, accessed October 2014).

TABLE 3: EMPLOYMENT BY SECTOR, 1996/97 TO 2008/09

	96/97	02/03	04/05	08/09	Change, 96/7-08/9
PRIMARY					
Agriculture	85.2	79.9	80.7	80.6	-4.6
SECONDARY					
Manufacturing	2.7	3.6	2.8	2.7	0.0
Mining	0.5	0.5	0.2	0.2	-0.3
SERVICES					
Commerce	4.0	7.3	7.8	7.9	4.0
Other services	2.7	2.8	2.9	2.9	0.2
Construction	1.4	1.6	1.4	1.7	0.3
Education	0.8	1.6	1.6	1.7	0.9
Government	1.2	1.2	1.2	1.1	-0.2
Transport	1.1	1.1	0.8	0.8	-0.2
Health	0.5	0.5	0.5	0.4	-0.1

Source: Jones and Tarp (2012), p. 26

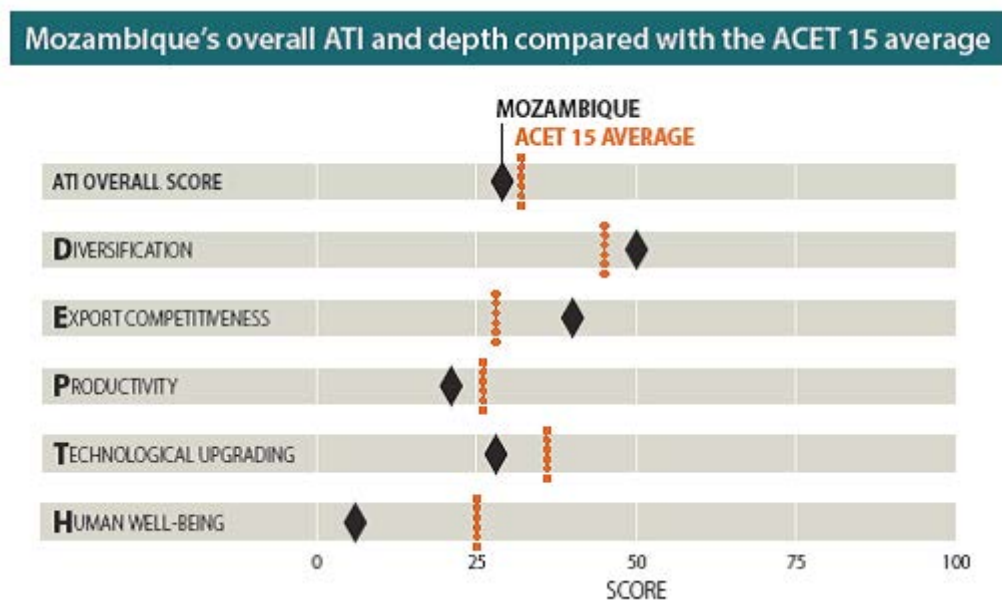
Mozambique's lack of structural change mirrors the current state of much of sub-Saharan Africa: limited increase in the role of the manufacturing sector, relatively low technology use by manufacturing, low productivity of agriculture, and some enclave projects that contribute to GDP but not to a great extent to jobs and widespread poverty reduction. This is confirmed by the African Center for Economic Transformation's (ACET) African Transformation Index (ACET 2014). The Index integrates five elements⁸ to benchmark the progress of fifteen selected sub-Saharan African countries, including Mozambique, toward structural transformation⁹. As seen from the chart below, Mozambique scores somewhat below average on overall Transformation. This is consistent with the effect of large, capital-intensive manufacturing "enclaves" such as Mozal, which push up the proportion of manufacturing in GDP and exports, but do not necessarily feed through into widespread jobs growth and improved wellbeing. On the other hand, Mozambique scores above average in Diversification and Export Competitiveness, although as the report itself acknowledges, this is principally due to the inclusion of megaprojects in manufacturing.

Of particular concern is Mozambique's Productivity score. While manufacturing value-added by worker (in 2005 dollars) increased from 15,594 dollars in 2000 to 34,102 dollars in 2010, this still compares unfavorably with the sub-Saharan African average of 41,949 dollars. Similarly, the proportion of "medium and high technology exports" in total exports is low, 6 percent in 2010 (up from 4 percent in 2000), compared to 8 percent on average for sub-Saharan Africa – and again, even this low figure is boosted by the high technology exports of the megaprojects. The significantly low score on Human Economic Well Being is a function of Mozambique's still-low GDP per capita and the small share of labor found in the formal sector.

⁸ The Index is comprised of five components: diversification of production and exports, export competitiveness, productivity, technology, and human economic wellbeing. Diversification of production and exports is measured by share of manufacturing in GDP, level of concentration of exports overall, and share of manufacturing and services in exports; export competitiveness is measured by the ratio of a country's share in the world's exports of non-extractive goods and services to its share in world non-extractive GDP, i.e. whether a country is able to export more non extractive goods and services than the world average; productivity is measured by manufacturing value-added per manufacturing worker and cereal yields; technology is measured by manufacturing value-added in production and exports; and human economic wellbeing is measured by GDP per capita and level of formal employment.

⁹ This approach also underlies the African Union's recently endorsed Transformation Vision for 2063, endorsed by Mozambique, which seeks the structural transformation of Africa's output and trade, strengthening of Africa's infrastructure and human resources, and modernization of Africa's science and technology.

FIGURE 4: MOZAMBIQUE AND THE AFRICAN TRANSFORMATION INDEX



Source: African Transformation Report 2014

2.2. MANUFACTURING OUTSIDE OF THE EXTRACTIVE INDUSTRIES

For this study, we concentrate on segments of the sector outside of the extractive industries. One of the richest sources of firm-level manufacturing sector data outside of the extractive industries is the series of surveys of small- and medium-sized manufacturing firms (SMEs) carried out by the Ministry of Planning and Development's Directorate of Studies and Policy Analysis (MPD/DNEAP 2013)¹⁰.

One of the 2012 survey's key findings of interest to our investigation is the fact that SME manufacturing firms struggle with international trade. Only 3 percent of the sample was engaged in exports. It is notable – and worrying for our natural resource boom scenario of a possible significant strengthening of the metical – that “competition from illegal imports” tops the list of concerns and has increased in importance since 2006. Other trade-related constraints are also growing concerns. Fears about “opening up to international markets” are also troublesome, should imports become cheaper under an appreciation scenario. In both cases, if this is a growing concern before the natural resource boom sets in with currency appreciation, firms could be very threatened should the metical strengthen considerably. Macroeconomic stability – which includes exchange rate concerns – does not seem to pose a major constraint and is significantly less of an issue than in 2006. This is not surprising, given that the macroeconomic environment, including the exchange rate, has been fairly stable in recent years – our concern is with the future performance, which may not yet be on businesses' horizons. Trade-related issues regarding Customs administration, trade regulations, and Customs-related corruption are also of concern and on the rise¹¹. Interestingly, access to land and transportation are both highlighted as constraints – and these are likely to become more problematic, should Dutch disease occur¹².

¹⁰ The 2012 survey includes over 700 firms in ten cities and seven provinces of Mozambique, 216 of which form a panel from previous surveys in 2006 and 2009, allowing for an understanding of firm dynamics over time. Manufacturing firms were defined as firms with no less than 50 percent of sales in manufacturing sectors. The survey defines manufacturing as ISIC rev. 3 divisions 15-37; these are equivalent to ISIC rev. 4 divisions 10-33.

¹¹ Since this survey was undertaken, Mozambique's Single Electronic Window was launched. An early assessment of its impact, conducted nine months after launch of service of two modules, reaffirmed firms' dissatisfaction (Claypole 2013), suggesting that a new evaluation be undertaken to see whether firms' concerns have been addressed.

¹² While land is not bought and sold in the traditional sense in Mozambique, nonetheless buildings and “improvements” to land can be sold, so we would still expect a Dutch disease-like effect on prices of these non-tradables.

TABLE 4: FIRMS & SELECTED BUSINESS ENVIRONMENT CONSTRAINTS

Constraint	% Citing as Concern in 2006	% Citing as Concern in 2012
Competition from illegal imports/contraband	54.8	56.8
Access to land	13.9	46.2
Customs & trade regulation administration	36.8	44.7
Corruption related to customs	30.5	43.2
Anti-competitive practices	26.4	39.0
Access to domestic credit	58.0	38.7
Transportation	25.0	38.7
Opening up to international markets	17.9	36.5
Macroeconomic instability	61.6	33.8

Source: MPD/DNEAP 2013

When reviewing constraints disaggregated by firm size, medium-sized firms seem to feel more constrained by external, trade-related aspects than micro and small firms. This could imply that medium-sized firms – those more likely to create jobs and become exporters – would export more if they were less constrained by these aspects. Medium-sized firms seem less credit-constrained – the cost of financing is seen as a constraint, rather than access to financing, but the high incidence of firms citing issues related to competition from illegal imports, customs and trade regulation and administration, and corruption related to customs suggests that these firms could be sources of exports, if these constraints were removed.

Moreover, some sectors have natural protection and have been more successful. The DNEAP study commented “... sectors that are not subject to considerable competition from imports have done well..., while sectors with tougher competition from imports (such as apparel, metals, and machinery) have been forced to downscale their operations and/or produce more efficiently using less labor-intensive methods” (MPD/DNEAP 2013, 32).

Additional findings from the MPD/DNEAP study include: Firms are not creating jobs. Micro firms tend to stay micro, small tend to stay small, and medium tend to stay medium. Median employment growth was negative for all firm sizes, whether formal or not. However, foreign ownership makes a difference. Foreign-owned firms have experienced more employment growth than Mozambican firms, are more likely to be formal, and are far more likely to export.

A surprisingly high share of firms survives over time, which could indicate tenacity/stability or a lack of dynamism whereby unproductive firms are not exiting the market. Firms in the textiles and apparel sector have much lower survival rates, however. As described in Box 2, the textile and apparel industry in Mozambique has diminished significantly in the last ten years¹³.

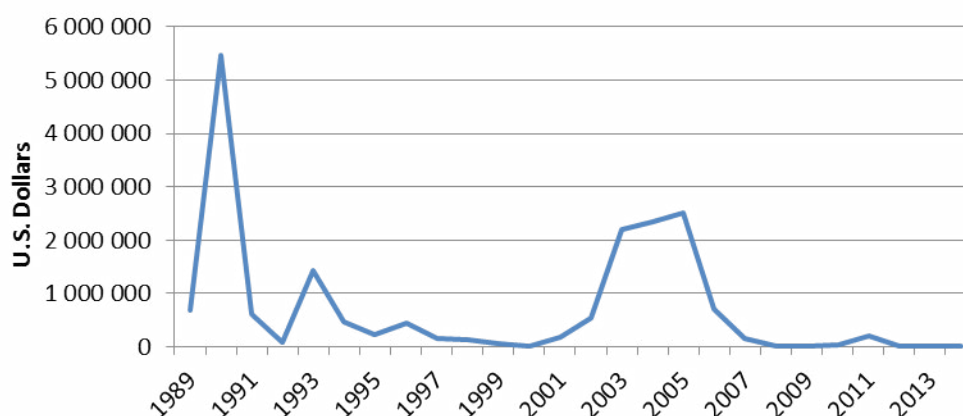
¹³ The garment industry is notably “footloose,” that is, its low capital-intensity makes it easy to move out of a country if the business environment is no longer favorable. Other manufacturing industries either cannot pick up and leave, if their capital is already invested here, or may choose not to invest in Mozambique, if they perceive that more favorable business environments are available elsewhere.

It is of concern for manufacturing sector competitiveness that minimum wages are increasingly de-linked from productivity¹⁴. Real wages in manufacturing have increased steeply, above productivity levels¹⁵. The 2011 manufacturing sector minimum wage was higher than the median value-added per employee in the micro informal sector. Even for the formal sector, median wages in micro-sized firms were not much higher than the minimum wage, suggesting that at least some formal firms generate value-added per worker below the minimum wage. This leads the authors to conclude that “the minimum wage is above labor productivity for a large part of the Mozambican workforce.” Moreover, labor productivity may be declining. Looking at 2006 and 2011 data, labor productivity, measured by median revenue per worker, seems to have declined for all sizes of firms covered by the survey (micro, small, and medium).

Box 2: The Rise & Fall of Textile & Garment Manufacturing in Mozambique

Mozambique’s textile and garment industry offers one example of the disappointing record that has characterized a once-promising segment of manufacturing. In 2000 when the United States Africa Growth and Opportunity Act (AGOA) was passed, offering duty-free access to the U.S. clothing market for exports from sub-Saharan African countries that complied with AGOA’s rules of origin or exemption rules, Mozambique, like many other African countries, hoped this would jumpstart export-oriented manufacturing and bring a new source of wage employment, with all of the positive spillover benefits that such industrialization offers. In 2004 SPEED’s predecessor project, the Trade and Investment Program in Mozambique (TIPMOZ), offered a textile and garment industry strategy based on perceived competitive advantages at the time: abundant supply of low-cost labor, access to ports and shipping, and a stable political and macroeconomic environment. On the other hand, the strategy was realistic about the steepness of the competitiveness hurdles to be faced, including labor, Customs, transport/shipping, and other business environment issues (Minor 2004).

VALUE OF U.S. TEXTILE AND APPAREL IMPORTS FROM MOZAMBIQUE, 1989-2014



Source: U.S. Department of Commerce, Office of Textiles and Apparel

¹⁴ The survey asked firms about the extent to which labor regulations and skills/education of workers, but not whether rising wages or wage/productivity relationships, were of concern.

¹⁵ Nominal wages increased by 115 percent from 2006 – 2011, while the price level only increased by 60 percent.

Those hurdles turned out to be fatal. After expiry of the WTO Agreement on Textiles and Clothing, global apparel companies concentrated their efforts in countries with favorable production platforms, especially in Asia. The value of Mozambique's apparel exports to the United States, surging when the TIPMOZ strategy was offered, has evaporated. A few remaining companies export to neighboring South Africa, but quantities are small, productivity low, and profitability questionable. While Mozambique's macroeconomic environment today still looks stable, its security environment has appeared less reassuring, its labor force is no longer low-cost, and the benefit of coastal access to ports is somewhat negated by weak trade facilitation institutions that contribute to Mozambique's ranking 110 out of 150 countries, according to the Logistics Performance Index.

Thus the insights from the MPD/DNEAP survey suggest to us that international market competition, whether in terms of "opening up to international markets" or "competition from illegal imports," is already a serious concern for a notable share of firms surveyed. Also, the survey paints a picture of SME manufacturing firms as fairly stable or non-dynamic, neither creating new employment nor engaged in a normal process of repeated creation and dissolution that would allow less-competitive firms to exit the market. Such exits are good for an economy, reflecting a healthy level of competition that should lead to higher productivity and competitiveness.

2.3. GOVERNMENT STRATEGIES TO PROMOTE INDUSTRY

The constraints faced by the manufacturing sector are not new. Government and donor initiatives have been designed to address them, although generally these focused on the private sector more broadly, rather than manufacturing specifically.

Industrial policy, encompassing a range of government actions and collections of policies to encourage development and production of sectors with potential for growth (Menon 2014), can be vertical (i.e. targeting support at specifically chosen sectors or "picking winners") or horizontal (i.e. an overall policy approach that aims at making the business environment more conducive to industrial development through eliminating constraints such as poor infrastructure, fiscal, legal, and regulatory regimes, etc.). Given Mozambique's stage of development and the poor record of success at "picking winners" in many countries, it would seem that a horizontal approach to industrial development would have the greatest chance of enabling Mozambique to foster nascent industries, attract industrial investment, create jobs, and contribute to the development of a diversified economy that is not too heavily dependent on extractive industry. In general today around the world, horizontal approaches are the more prominent in official policy, although examples exist of specific state interventions that are more vertical or sector-specific.

Such an approach requires coordination across various government institutions. While the Ministry for Industry and Commerce is central to industrial policy, many of the most widely cited constraints to business are outside its mandate – for example, workforce, infrastructure, power, and financial issues. Thus it is important that any industrial policy be a coordinated approach under an overall development strategy that pulls together these various agencies. Mozambique's national policy statements relevant to manufacturing include the following:

- PARPA I/II and PARP: The government's action plans for poverty reduction have moved away from a focus almost exclusively on social sectors (PARPA I, 2001-06) towards recognizing the need for economic growth. PARPA II (2006-10)'s priorities included promotion of agro-industrial and labor-intensive manufacturing (PARPA II, p. 34-5). PARP continues the shift and emphasizes improving the business environment for SMEs as a way to promote job creation. There has never been a clear link between the successive PARPAs/PARPs and sector plans, which often have different time horizons.

- **SME Strategy:** The 2007 Strategy for the Development of Small and Medium Size Enterprises in Mozambique recognizes the key role SMEs can play. The Institute for the Promotion of Small and Medium Enterprises (IPEME), established in the Ministry of Industry and Commerce, is defining strategies for four sectors – agribusiness, textiles and clothing, chemicals, and rural industrialization (Kaufmann and Krause 2011).
- **The Strategy for the Improvement of the Business Climate (EMAN I, 2008-2012) and its successor (EMAN II, 2013-2017)** seek to simplify procedures for doing business and improve competitiveness, through cutting red tape and deregulation in many areas; reform of procedures for starting businesses, licensing and payment of business taxes and implementing mechanisms to ease access to credit. Implementation, however, has been hampered by lack of government capacity to implement reforms, especially at lower levels of government, funding, and coordination across government and with the private sector (Kaufmann and Krause 2011).
- **Industrial Policies:** Mozambique’s industrial policy (1997, 2007, and a new version under development) has utilized a set of horizontal policies (e.g. creation of industrial free zones, promotion of quality, development of human resources, improvements in the legal framework, and improving access to imports) and, as of 2007, a more vertical approach targeting particular sectors (e.g. textiles and apparel). Failure to implement their main objectives undercut the policies’ effectiveness, leading to firm closures in chosen sectors (textiles and apparel) (Menon 2014; see Box 2). The new industrial policy will hopefully build on, and operationalize, the strategic focus of the ENDE (see below).
- **Special Economic and Free Trade Zones:** To encourage export-oriented industrial investment, Mozambique has developed specialized physical areas and duty treatment categories, managed by the Special Economic Zones Office (GAZEDA). Companies in Industrial Free Zones access imported capital goods and inputs free of import duties, VAT, and excise taxes, receive higher foreign worker quotas, and corporate tax exemptions/reductions, provided that 70 percent of output is exported. Special economic zones (SEZs) have not yet seen much activity. A large, “general” SEZ was established in Nacala, linked to the development of the railway; other “thematic” SEZs (i.e. focused on specific sectors, such as logistics or tourism) are in initial stages or are planned.
- **National Development Strategy:** The recently approved National Development Strategy (ENDE) is a 20-year vision that places industrialization and a diversified economy at its heart (República de Moçambique 2014). It proposes a mix of horizontal strategies, identification of priority sectors (agriculture, fisheries, manufacturing, extractive industry, and tourism), organized into four pillars: human capital development, industrial infrastructure development (industrial parks, special economic zones, transport infrastructure etc.), research and development, and institutional coordination. The ENDE could provide the framework for the five-year plan and development of detailed strategies in sectoral ministries. It remains to be seen whether it will have sufficient institutional support at the highest levels to play a coordinating role across government.

Policies and strategies that favor industrialization and creation of an enabling environment for private sector development are an important step toward building the structural transformation of an economy. However, although an estimated 10 billion dollars have been spent by donors on private sector development projects, two of Mozambique’s business representative organizations (CTA and ACIS 2013) argue that reforms of the business environment have stalled, government actions have been ineffective, and pressure for protectionist measures is rising. International benchmarks bear out lack of forward progress on pro-business reforms. Mozambique ranks 133 out of 144 on the World Economic Forum’s 2014-15 Global Competitiveness Index, and has moved only tentatively on the Doing Business Index over recent years. However, with a long gestation period, there are signs that some reforms have had a positive impact on specific aspects.

Overall, manufacturing in Mozambique faces a difficult business environment. If the sector is already struggling and uncompetitive, any worsening of one aspect of its operating environment – such as an appreciation of the metical due to the potential onset of Dutch disease – could be catastrophic, both to existing firms and to the government’s stated desire to industrialize.

3. ASSESSMENT FINDINGS

3.1. STUDY APPROACH

SPEED consultants worked with CTA and drew from recent literature to identify a set of manufacturing firms to be interviewed¹⁶. A sample of 27 firms was compiled, across industrial divisions; see Table 5 for sample coverage. The sample is representative of the broader population of non-extractive industry companies that manufacture today in Mozambique. Interviews were held in August 2014. In a few instances, the firms interviewed are not currently manufacturing in Mozambique, but may have plans to do so or may have considered manufacturing and decided against it¹⁷.

TABLE 5: MANUFACTURING STUDY SAMPLE

ISIC Code	Sector	Number of Firms	Examples of Products
10	Food processing	6	Animal and dairy products, fruit preserves, milled grains, pastas, cooking oil, prepared foods, animal feeds
11	Beverages	5	Soft drinks, mineral waters, spirits, malt beverages
13, 14	Textiles, garments	3	Cotton thread, garments (shirts, trousers)
15	Footwear	1	Work wear, heavy duty boots
16	Wood products	1	Railway sleepers, semi-finished wood pavers
17	Paper products	1	Packaging materials
20	Chemicals	2	Paints, blended fertilizers
23	Non-metallic mineral products	2	Cement
25	Fabricated metal products	3	Corrugated steel, structural steel roofing, metal safes
28	Machinery & equipment	1	Maize grinding mills, wood saw mills, hand presses (honey)
29	Transport equipment	1	Truck trailers
31	Furniture	1	Wooden chairs, tables, bed frames, armoires, couches, accessories
	TOTAL	27	

The investigation checklist used to guide the interviews sought information regarding structure of markets and value chains, main sources of competition, qualitative competitiveness and primary cost drivers, business challenges faced, and perceived vulnerabilities to currency appreciation.

Firms interviewed vary by sector, products, scale, capital- versus labor-intensity of the production process, source of raw materials and/or intermediate inputs, ownership, degree of innovation or differentiation in the products, targeted markets for output, and degree of competition found in the domestic marketplace. Distribution of the sample by ISIC division is presented in Table 5.

¹⁶ It was not possible to obtain the sample used in the 2012 MPD/DNEAP survey.

¹⁷ The local subsidiary of a multinational food products company is evaluating whether to manufacture processed foods for the domestic (and possibly regional) markets of products that are not being otherwise produced by fellow, regional subsidiaries. A transport vehicles company had considered manufacturing truck trailers in Mozambique, but decided against it because of strong competition from Chinese firms. And a textile company is just setting up its operations for eventual value-added processing and export.

3.2. SAMPLE CHARACTERISTICS

The firms interviewed ranged in size, although most would fit the Ministry of Planning and Development's definition of medium-sized enterprises¹⁸. We spoke with two micro firms (a boutique firm manufacturing metal safes with 7 employees and a firm producing foods and beverages from locally harvested, wild and cultivated produce) and a few small firms (for example, a steel products firm in Beira with fewer than 30 employees). Most of the firms interviewed are medium-sized firms with between 50 and 299 permanent employees¹⁹. Large firms ranged from those with just over 300 employees (e.g. Maputo Clothing Company, TCT Dalmann) to those with several hundred (e.g. Companhia Industrial de Matola) to over 1.000 employees (e.g. Cervejas de Moçambique (CDM) and Coca-Cola).

The sample of firms includes both wholly Mozambican and wholly foreign-owned companies, with a wide range of joint ventures. A few of the companies are local branches or subsidiaries of multinational or regional companies (e.g. Nestlé, Coca-Cola, Intersteel Rollings, and CDM, which is owned by SABMiller). A few firms were launched by regional investors (e.g. Greenbelt Fertilizer) but may now be wholly Mozambique-based (e.g. Cheater Industrial Roofing). In a few instances, international non-profit organizations may comprise part of the firm's capital (e.g. LevasFlor is jointly owned and operated by the Anglican churches of Mozambique and Sweden).

Although challenging to quantify (this investigation did not ask firms to elaborate specific costs of production, though it did ask about relative shares of key cost drivers), the degree of value added by manufacturing in Mozambique varies greatly within the sample, depending on the products made, the level of transformation performed, and the services added to the sale of goods.

A few of the interviewed firms develop and process their own raw materials. These include CDM, which incorporates locally produced maize and cassava into some of its beers; Gutsamba, which harvests wild forest fruits for flavorings and ingredients in its liqueurs and preserves; MCM, a just-launched textiles firm that will produce seed cotton through outgrower contracts for spinning into thread (and eventually, it is hoped, additional value-added products); and LevasFlor, a wood product firm, and TCT Dalmann, a wooden furniture firm, which process timber from their own forestry concessions.

In contrast, many of the companies interviewed for this study import their raw materials or intermediate inputs from South Africa, Asia, and elsewhere. These raw materials and inputs are then ground, cut, sawn, planed, blended, sewn, shaped, canned, bottled, or otherwise assembled to produce final products.

Products manufactured by firms in the sample range from standardized (e.g. t-shirts, basic trousers) to design-intensive (e.g. high-end, wooden furnishings) or "aspirational" brands. However, even if the goods are somewhat standardized many companies seek to provide some qualitative form of competitive differentiation. For example, Greenbelt Fertilizer custom blends fertilizer components to provide products that respond to specific soil types, thereby offering extra value added to customers who do not necessarily understand which blends they need. CDM offers a range of beers differentiated by ingredients, alcohol content, price point, and responsiveness to regional tastes. Companhia Industrial de Matola (CIM) produces a range of milled maize flour products to address various market segments. Both of the steel product firms with whom we spoke offer custom cutting and shaping to manufacture steel products to customer specification. These dimensions provide an additional competitive edge to firms.

¹⁸ MPD/DNEAP (2013) notes, "The size dimension is divided into three size categories using the standard World Bank definition; micro (1-9 employees), small (10-49) and medium (50-299), counting only full-time permanent employees." In fact, size classifications seem to vary among international organizations. A paper prepared for the Consultative Group to Assist the Poor bemoans the lack of a standardized definition (Ardic et al. 2011).

¹⁹ About one quarter of the firms indicated that they hire additional temporary labor on a seasonal or as-needed basis.

A few of the companies interviewed operate in product segments that are likely to boom, along with the natural resource extractive industries. Both cement producers interviewed in Beira have only recently come online (one is still in progress, one has only become operational in the last year), the results of foreign investments or joint ventures that anticipate a surge in construction in Mozambique and thus a sharp increase in demand for concrete. One is also contemplating investment in northern Mozambique. A wood products company's staple production of railroad ties (sleepers) has benefited from the railway investments being made by the coal industry. And both steel products companies interviewed are eager to provide construction materials to an expanding industrial, commercial, and residential real estate market.

Not only the products themselves, but also the strategic, long-term view taken by managers with regard to Mozambique's economic growth would seem to strengthen firms' competitive positions. Some manufacturers are responding to short-term market opportunities. Others are anticipating structural changes in the economy. They see that a booming economy will require provision of x and y goods in order to grow faster and are preparing for that now. Still others are thinking ahead to the emergence of a middle-class in Mozambique whose consumer tastes are going to grow and evolve, and are preparing to manufacture a wider assortment of consumer goods to meet those demands. These latter firms are not immune to Dutch disease pressures, but their strategic business plans may provide elements (e.g. diversification of products or markets, financing, etc.) that may make them more resilient to such pressures.

Few of the firms interviewed aspire to export their production, even within the region. Most perceive their local market shares as secure and see exporting as a headache, with a good deal of risk. In the case of foods and beverages, there are additional regulatory hurdles to climb. Several companies mentioned that they have been contacted by the USAID-supported Southern Africa Trade Hub, i.e. they are aware of available sources of technical guidance should they decide to pursue regional markets.

There are, however, several exceptions. Textile and clothing companies export all of their production, operating as "free-zone factories," i.e. they receive imported inputs (fabrics, trims) under a duty drawback system. LevasFlor's production is sharply demarcated between a reliable seller on the domestic (and sometimes regional) market (railroad ties/sleepers) and an exportable, semi-finished product sold to China (wood pavers for parquet flooring manufacture). Greenbelt Fertilizer exports in the region, particularly to Zimbabwe, Malawi, and Zambia. TCT Dalmann occasionally ships to South Africa (to individual clients), and transport costs are high.

Finally, manufacturing firms are quite differentiated by the extent to which they perceive competition pressure from outside for their market share. In numerous instances, managers spoke confidently of their product quality, unique position in the market, and the consumer brand loyalty that these confer. In cases of companies that produce more standardized products, managers spoke more nervously of foreign suppliers' actual or feared encroachment in the domestic market, lamenting the limited or lack of tariff protection. In some cases, firms are very aware of the fact that the rand has depreciated significantly over the last 18-24 months, giving South African suppliers a cost-competitive edge over them in the Mozambican market (in some ways, a preview of what may happen if a more generalized metical appreciation takes place). One manufacturer indicated that he passes cost savings from cheaper South African imports of raw materials along to his customers.

Some companies are already feeling the pressure of being undercut by South African or Asian suppliers. Surprisingly, some companies had never taken exchange rate fluctuation into account when weighing the costs and benefits of actual or potential investments – or if they had, it was a depreciation scenario that they had considered. Also, for those companies that rely heavily on imported inputs to manufacture for sale in Mozambique, managers were cheered by the prospect of a stronger metical that would further reduce the cost of their imported inputs, without necessarily factoring in that their importing competitors would face the same benefits. One company currently manufacturing products in Mozambique speculated that it would shift to importing less expensive goods and selling those instead to customers. For one firm, the cycle of importing raw material, adding value, and selling is of a sufficiently short time cycle (i.e. materials are sourced from South Africa on-demand and little product inventory is kept on hand) that its manager believed an appreciating metical would have little effect on his firm's business.

3.3. GENERAL CONSTRAINTS ON MANUFACTURING IN MOZAMBIQUE

How well individual firms can operate within the business environment in Mozambique is another dimension of firm competitiveness. For some managers, working through the levels of red tape and connection-building required to establish trust with government decision makers is part of their business strategy. This becomes part of their comparative advantage, since these aspects of the business environment act as an effective barrier to entry. For others, developing partnerships with related firms in order to be able to bid on large projects as an ensemble is a key strategic element. Some firms have learned that they need to build their own, or redundant, infrastructure in order to compensate for local infrastructure shortcomings. Developing local storage and distribution networks is another key element, especially for firms with larger-than-local market aspirations or operations, particularly crucial in a country as large as Mozambique. Similarly, for firms that process locally produced materials, developing supplier networks and helping those suppliers meet their quality and market timing requirements is another key dimension of doing business. Such aspects of business are, in a way, a sunk cost of already operating in Mozambique.

During our interviews, a number of constraints on business operations were repeatedly raised by managers. While not directly related to Dutch disease, a weak and constrained manufacturing sector is likely to be hit even harder by any potential shocks – including those associated with Dutch disease. Therefore, in this section we briefly summarize the general business environment facing Mozambican manufacturers.

Operating in manufacturing in Mozambique is a risky business, in part due to uncertainty. Firms we spoke to had come up against unexpected costs to start or expand their businesses, while others mentioned unexpected increases of significant size in key costs. Forestry companies faced a tripling of license fees in one year and an increase of 92 percent in electricity costs from one month to the next. Other firms faced lack of clarity in interpretations of particular laws or regulations and what they felt to be unrealistic fines or outright harassment by government inspectors.

Box 3: Managing Unexpected Costs

One recurring theme we encountered involves tales of unexpected costs hampering the start-up or operation of manufacturing firms. One company interviewed was in the process of a major expansion to increase significantly its production capacity. The firm had been allocated a piece of land to construct a new factory, but it had no access road. After some discussions with the local council, the company needed to invest 2 million dollars itself to build a road in order to make use of the allocated land. Another company, foreign-owned, had been guaranteed electricity supply by the state electricity company EDM, only later learning that they would have to construct an electricity sub station in order to use it.

Uncertainty can limit firms' willingness to invest in higher value-added processing. For example, one sample company exports semi-finished wood pavers to China, where they are cut into thin veneers and assembled into parquet flooring, which is then shipped to Europe. Asked why not invest in equipment capable of producing such veneers and add greater value in Mozambique, the firm indicated that high costs are dissuasive. A regional firm that manufacturers truck trailers had considered establishing manufacturing in Mozambique. However, upon close review of costs, the company opted instead to continue to import them from South Africa and sell in Mozambique.

Labor productivity was repeatedly cited as a source of frustration and increased costs. This is related to absenteeism, lateness, and lack of focus on the job. In a production line such as the clothing factories we visited, this can cause stoppages as certain areas of the line are obliged to stop and wait for others to catch up. A number of companies expressed frustration that minimum wages increased significantly above the rate of inflation and far in excess of rates of productivity improvement.

Box 4: No Longer Competitive on Wages?

A garment factory cited the example of an Asian competitor that also produces for one of its end clients. Wages in Bangladesh are said to be 90 dollars per month for a 12-hour day, compared to a monthly minimum wage in Mozambique of 130 dollars for “eight very unproductive hours.” A number of Mozambican companies claimed that wages had increased faster over recent years than could be justified by improved productivity.

Instability of electricity supply is clearly a major issue, with one manufacturer telling us that it experiences stoppages equivalent to 10-15 percent of normal work hours, due to electricity supply issues, which they identify as one of the main factors for being uncompetitive, compared to South African producers of similar products.

One manufacturer, whose main clients are government institutions, mentioned serious cash flow problems due to delays in payment. The firm has developed a system whereby clients are “cut off” once they reach a certain limit, in order to limit risks to cash flow.

Interestingly, many of the firms in our sample are aware of, but rarely use, short-term financial instruments offered by banks to buy forward cover on exchange rates²⁰. Payment for such a service could be a worthy expense if exchange rate volatility were a serious concern. Currently in Mozambique it is not a worry, so instead firms prefer to negotiate with a number of banks to get the best day rate at the time of the transaction. Another interesting finding was that few of the firms mentioned access to finance or cost of finance as a constraint, which differs from the findings of the DNEAP study. This may be because we simply asked for key constraints, whereas the DNEAP survey gave a pre-selected list to choose from. It may be due to the fact that our sample involved larger or more predominantly formal firms. Or, this might imply that financing constraints are not as binding as suggested by the survey results.

Repeated mention was made of inefficiencies with Customs and, in particular, with the ports. Many firms transport products across the country, at great expense, by truck. Moreover, many claim that if the ports functioned efficiently, allowing establishment of an internal cabotage system, they would undoubtedly use it. In fact, two of our interviewees had tried to send products by sea from Maputo to ports in the north of the country, but found that the costs and inefficiencies – which ranged from not knowing when the ship would be able to enter port, to delays in loading and costs of the ship staying longer than planned in port, and uncertainty over when the product would arrive at its destination – meant that it simply did not make sense to continue to use this option.

Constraints that might be more directly affected by Dutch disease obviously include exchange rate or international trade constraints, and the likely increase of costs of goods and services, such as transport and access to land²¹. A number of companies stated that transport costs are already too high, when compared with the region. One felt that some effects of Dutch disease are already being felt, as the surge in demand for transport in the center and north (related to booming coal and gas business) is already having an impact on transport prices across the country.

Box 5: Illegal Imports and Imports of More Competitive Substitutes

One company complained that both illegal imports – i.e. the entry of competing goods into Mozambique without paying duties or taxes, particularly from neighboring countries – and legal imports from more efficiently producing countries are significant problems that are reducing sales. This company is struggling, has laid off staff, and has put major expansion plans on hold.

²⁰ The bank agrees to pay a supplier in the supplier's currency a few weeks or months in the future, for a metical value fixed at the beginning of the period. This allows the company to know in advance how many meticals it will have to pay for a product in the future. In the current, stable exchange rate environment, however, firms prefer to simply negotiate with their banks to set the rate, rather than paying banks for assured forward coverage.

²¹ A previous SPEED study (Salinger and Ennis 2014a) concluded that while theoretically under Dutch disease wages in certain sectors would rise, given the highly segmented nature of the Mozambican labor market there is unlikely to be a strong upward effect on wages at any but the highest skilled levels.

Competition from imports is a significant problem faced by a number of firms interviewed, with manufacturers from China being the biggest perceived threat, in goods ranging from shoes to cement to metal products to truck trailers. Often, firms stated that Chinese imports are of lower quality but are far cheaper. Some stated that customers had previously tried Chinese products and reverted to locally manufactured ones. However, the general consensus is that lower priced imports is one of the biggest problems for many companies. Some firms allege that Chinese companies evade duties and thereby create illegal and unfair competition. Others stated that Chinese firms are “willing to pay to get things done” and can therefore more easily operate in an uncertain environment. Illegal importing in general, i.e. avoiding duties and Customs, was cited as problematic by several companies.

3.4. LIKELY IMPACTS OF THE NATURAL RESOURCE BOOM

To predict the potential impacts of the natural resource boom on manufacturing in Mozambique, we created a number of firm categories to capture structural and market characteristics that may influence the impacts of natural resource boom-induced “Dutch disease” on their operations. It should be noted that this is a partial analysis, as we have no way of knowing what firms who are not currently manufacturing in Mozambique would do under a non-Dutch disease scenario. We also at this stage have no way of knowing how severe Dutch disease would be, and have thus concentrated on general drivers of resilience in the face of it, with “worst-case scenario” nominal currency appreciation hypothesized between 30 and 50 percent²².

- **Degree of Exposure to World Markets:** The most important variable affecting a firm’s potential vulnerability to currency appreciation and shifting relative prices is the degree of a firm’s exposure to world markets. Significant currency appreciation means that, on the one hand, a firm’s imported raw materials and inputs become less expensive in meticals terms. However, in the case of goods produced domestically for import-substitution, competing goods also become cheaper to import. This underscores the importance of a firm’s ability to withstand competition from those cheaper imports. That ability to compete is sometimes determined by costs, sometimes by qualitative factors. In the case of goods produced in Mozambique for export, the price of which is most likely determined in world markets, the revenues, expressed in meticals, of those exports will decline, thereby reducing incentives to produce for export.
- **Share of Non-Tradables in Total Cost:** In addition, the degree of exposure to increases in the prices of non-tradable inputs, such as wage rates, commercial real estate, and transport costs, is also important.
- **Product Differentiation:** The extent to which a firm’s business model focuses on manufacture of standardized, specialized high-quality, or “aspirational” (sought-after brands) consumer goods also affects their resilience to Dutch disease pressures.
- **Degree of Local Market Competition:** The degree of competition currently faced in the domestic market also plays a role.

Many other factors may have an impact on a company’s profitability and survival, irrespective of the exchange rate, but these are not our focus here. Box 6 provides a sampling of firms’ responses to the metical appreciation question. The sections below lay out preliminary analyses of possible impacts of Dutch disease under a hypothetical scenario in which other competitive factors (e.g. business environment, infrastructure, electricity supply, labor productivity, etc.) remain the same.

²² At 30 meticals/dollar, one metical equals 0.033 dollars. Appreciation to 20 meticals/dollar means that one metical equals 0.05 dollars. The increase in value is thus 50 percent ($0.05/0.03333 = 1.50$). This is a “worst-case” scenario that proxies a range of possible Dutch disease-type impacts on the nominal exchange rate, government spending, levels of domestic prices of non-tradable goods and services, and thus the real exchange rate.

Box 6: Firms' Own Voices Regarding Dutch Disease

When faced with a hypothetical scenario of a strengthening of the metical from 30 to the dollar to 25 or even 20, some firms were sanguine and others very concerned, observing:

- 'The market is going to be booming, so we're not worried.'
- 'It would be good, our imported raw materials would be cheaper and [the strength of] our brand means we won't suffer competition from imports.'
- 'We could hold our own against imports due to our strong brand.'
- 'Most of our orders are short term, so we're not worried – we'd price in dollars.'
- 'If imports start flooding in, we could import a cheaper line to run alongside our current one.'
- 'We've never thought about it, but our margins are already thin.'
- 'This would be a big problem, as Chinese goods will become even cheaper.'
- 'We would stop manufacturing and become an importer [instead].'
- 'It could put our whole production at risk.'
- 'We'd make a loss.'
- 'We would have to close down parts of the business.'
- 'We are not profitable as it is, so we'd just close.'
- 'We would just close down.'

OVERALL OUTLOOK IN THE FACE OF DUTCH DISEASE: FAVORABLE

"ASPIRATIONAL" CONSUMER GOODS PRODUCERS

Firms in this category (examples include Coca-Cola, Nestlé, CDM, and Diageo) produce consumer goods with high brand recognition and strong customer loyalty. They see a booming economy and burgeoning middle class as an opportunity to increase domestic production and sales. Most of their raw materials/inputs are sourced internationally, such that an appreciation of the metical would decrease their costs. On the other hand, their strong brand recognition means that they feel they are likely to be able to "hold their own" against cheaper imports. These firms typically operate at a fairly capital-intensive level, with electronic production lines that require highly qualified staff. Labor, however, is a relatively small proportion of overall costs and therefore while the business may suffer somewhat from increases in wages for skilled labor, this is unlikely to prove a serious competitive threat. However, increased transport costs would likely be significant for these companies, who distribute overland nationally, but are unlikely to pose a major threat to profitability.

OVERALL OUTLOOK IN THE FACE OF DUTCH DISEASE: AMBIGUOUS, POSSIBLY FIRM/SECTOR-DEPENDENT

WEAKLY DIFFERENTIATED GOODS + STRONG VALUE-ADDED SERVICES

Firms in this category import raw materials/inputs into the local market, add some value (e.g. through simple value-added processing, such as cutting or combining ingredients or shaping metal/plastic), and sell fairly basic, undifferentiated final goods into the domestic market. These companies are likely to face strong competition from imports. The degree to which they can maintain market share may depend on value-added services that they bundle into their business model. For example, one cement factory plans to allow clients access to their laboratory in order to determine the optimal concrete mix for their needs, a fertilizer company is carrying out soil sampling to offer “custom-blended” fertilizers, a metal-shaping company offers custom shaping and assembly services by an experienced team. Other firms’ competitive strengths rely on established distribution networks and contacts, and possibly transport networks. New entrants could, of course, adopt such practices as well, but it will take them longer to establish themselves with the local customer base. However, that consumer base is likely to be changing, as more companies enter with commercial needs and a growing middle class demands more and more varied consumer goods. The established manufacturing firms most likely to succeed are those that can respond most efficiently to that changing base.

HIGH QUALITY, CONSUMER GOODS PRODUCERS

Firms that source local materials and sell high quality, finished products into the domestic market with little or no local competition might initially seem immune to Dutch disease. One example of this might be TCT Dalmann, a company with a forestry concession in Sofala that produces high quality, wooden furniture. Despite currently having little competition at the top end of the domestic furniture market, if the metical were to appreciate significantly, Dalmann could potentially face competition from importers that decide to move up-market in the goods they sell domestically.

Rising costs of non-tradables may be an issue. For example, Dalmann, which produces in Beira, could suffer from increased transport costs. As a company that employs a fair amount of skilled technicians (wage costs are almost half of total costs), rising wages of skilled labor under a potential Dutch disease scenario are of potential concern. However, it is felt that the skills utilized in this industry are not directly substitutable for the skilled construction workers likely to be required directly by the extractive industries in a natural resource boom, thus the wages in this sector are unlikely to rise due to demand from the extractive industry itself. However, if the natural resource boom leads to more general, rapid expansion of infrastructure or construction, then even less-skilled workers may be pulled into those booming sectors with consequences for market wages. A booming economy could also encourage Mozambique’s policymakers to raise official minimum wages, driven by aggregate GDP growth rates and thus perceived increased capacity of employers to pay higher wages.

It is, however, likely that demand will continue to be strong for high quality products as the economy booms, and it is likely that Dalmann has a sufficient consumer market niche to be able to continue to sell its full production – which is limited in volume, due to the timber harvesting limits of sustainable forestry – at a premium, so the likely impact on the business is difficult to ascertain.

Another example of a predominantly locally sourced product is a small food processing company called Gutsamba. Set up by a husband and wife team, Gutsamba is still in a start-up phase, although over 40 shops already stock their product. While some of its intermediate inputs are imported (e.g. alcohol, bottles), liqueurs and jams are produced from local wild fruit and high quality piri-piri from locally produced ingredients. The company’s original processing facility is in the greater Maputo area, but it will soon start producing pickles in new facilities in Inhambane. Given the uniqueness of its products and the limited substitutability for imported goods, Gutsamba is unlikely to face serious problems from Dutch disease due to exchange rate or relative price shifts. Its success is more likely to be related to its ability to market its products, establish more extensive brand recognition, and grow its distribution network. Although not yet in its strategic plan, Gutsamba’s products could become high-value exports to South African markets, and a stronger metical would make that goal more difficult to achieve.

OVERALL OUTLOOK IN THE FACE OF DUTCH DISEASE: DIFFICULT

WEAKLY DIFFERENTIATED GOODS

While Coca-Cola, Nestlé, CDM, and Diageo are international firms with high tech production lines and aspirational consumer products, smaller local companies who produce goods for the domestic market for which substitutes from regional or international markets are readily available (e.g. grain products, some beverages) may face a more pessimistic outlook. While benefitting from cheaper raw materials/inputs, they may be less able to retain market share, as competing imports of similar products become cheaper. Labor and transport costs may also become more problematic, should these increase significantly.

One example of this sort of firm is Companhia Industrial de Matola (CIM), which produces maize meal, wheat flour, pasta, biscuits, animal feeds, etc. Based in Maputo, many of its raw materials are imported from South Africa, so a benefit in terms of reduced input costs might be expected. However, CIM is already facing significant competition from around the world for some of its main products – some due to the weakening of the metical against the rand (as evidenced, for example, in the increased imports of maize meal from South Africa) and some simply from competition from countries where productivity is higher (for example, imported pastas and biscuits). While still a fairly capital-intensive manufacturer, CIM employs a significant amount of labor (both in terms of total number of employees and proportion of labor in operating costs, which is over 40 percent), and could face some wage pressure under a Dutch disease scenario. Transport and trade facilitation costs are also felt by the management to be high already, and if they went higher still, could become problematic for the company, which has plants in Maputo and Beira and supplies nationally. CIM is already taking cost-cutting measures such as rationalizing operations and has put planned future investments on hold for the short term.

LOCAL VALUE-ADDED PROCESSING FOR EXPORT

“Cut-make-trim” (CMT) is an entry-level business model used in the global garment industry and represented in Mozambique by companies such as Maputo Clothing Agents, usually end clients, often from South Africa, provide all imported inputs (e.g. cloth, buttons, labels, etc.) and contract with Mozambican companies to cut, sew, and finish garments to order. CMT is considered to be the most basic garment company business model on the international value chain; the ability to source their own fabrics and trims or provide additional services (e.g. design, pattern-making, distribution) involves business skills that usually far exceed the capacity of entry-level clothing companies to provide. The main cost to the importing companies is Mozambican labor plus electricity and transport. CMT companies in Mozambique are paid for local costs only, which are 70-80 percent labor. However, similar to the case of the furniture manufacturer described above, due to the lack of skills appropriate to a booming economy in a natural resource expansion and due to the ease with which clothing companies can train entry-level workers to operate sewing machines, wages in this segment of manufacturing (of seamstresses, cutters, etc.) are unlikely to rise under Dutch disease pressure.

For garment companies doing business primarily with clients in South Africa, the impact of a currency appreciation is already being felt due to the recent appreciation of the metical against the rand. On the one hand, these companies receive their raw materials rather than purchase them, so they are not benefitting from reduced costs of imported inputs (and would also not under the scenario of a generalized appreciation of the metical). On the other hand, if the price of their CMT services is fixed in rand, then they will receive fewer meticals for every garment exported, although some South African clients have apparently raised the rates they are willing to pay, up to a point. Allied to a labor force that is paid more and yet is less productive than those of countries with thriving garment industries (e.g. Bangladesh, Vietnam, etc.) and given operational constraints, such as frequent electricity outages, this sector is already suffering.

STANDARDIZED GOODS FOR EXPORT

Firms that source raw materials or inputs locally in meticals and export to the international market will not benefit from lower input costs. At the same time, their revenues in meticals from sales of goods on the world market will drop as the stronger meticals would mean that world export prices expressed in meticals will fall. There are very few firms in Mozambique in this category, producing from local materials for the world market, but a recent investment by a Portuguese company, MCM, plans to do this. MCM aims to have a vertically integrated cotton operation, contracting with outgrowers and operating a plantation in Xai-Xai for seed cotton production. The Riopele factory in Marracuene is being renovated to process the seed cotton into lint, thread, and cloth; eventually, garments will be produced as well.

While the company is not yet producing, significant appreciation of the metical could be prejudicial to the success of the investment. It should be noted that this type of firm has the potential to create large numbers of jobs (MCM expects to create 800-900 jobs, once the full investment is implemented) and also as it sources locally, it can provide opportunities for small local businesses and outgrowers to supply the factory.

3.5. SUMMARY

Table 6 summarizes the predicted effects of metical appreciation and relative price shifts on these six categories of manufacturing firms.

Firms that are directly connected to global markets through exports and firms that produce weakly differentiated products for the domestic market, but for which imported goods could readily substitute, are most likely to face difficulties under

TABLE 6: SUMMARY OF POTENTIAL DUTCH DISEASE IMPACTS BY FIRM TYPE

Manufacturing Firm Category			Overall Outlook in the Face of Dutch Disease		
Product Category	Destination Markets	Examples	Favorable	Ambiguous	Difficult
Aspirational Consumer Goods	Domestic	Brand-name foods, beverages	√		
Weakly Differentiated Goods + Strong Value-Added Services	Domestic	Intermediate goods, e.g. agricultural inputs, construction materials		√	
High Quality Consumer Goods	Domestic	Specialty consumer goods, e.g. foods, beverages, home goods		√	
Weakly Differentiated	Domestic	Basic foods, beverages			√
Local Value-Added Processing	Export	Clothing			√
Standardized	Export	Intermediate goods, e.g. threads, textiles			√

Source: Study Team Analysis

a Dutch disease scenario. Companies that manage to differentiate themselves, either through the manufacture of more differentiated products or through the provision of additional services to customers to enhance their connections to them, may be more resilient to price pressures. Companies that produce “aspirational goods” likely to be consumed in greater quantities as consumer incomes rise, face the most favorable prospects under a natural resource boom scenario; however, these firms are not immune from competitive pressures of lower cost, imported substitutes.

In light of overall welfare and development goals, it should also be noted that according to our analysis those firms that have the most favorable outlook under a possible Dutch disease scenario are those that create the fewest jobs, being capital-intensive in nature and sourcing raw materials internationally rather than from local suppliers. On the other hand, companies that are labor-intensive, source locally, and export (thereby with the potential to create jobs directly and indirectly, and contribute to “learning through exporting”) have a difficult outlook under a Dutch disease scenario.

4. CONCLUSIONS

Based on detailed conversations with company managers, which were guided by an investigation framework that sought to understand the sources of competitiveness of manufacturing in Mozambique on both cost and qualitative/strategic levels, this study probed the sources of resilience and vulnerability to potential economy-wide changes that may be induced by the anticipated natural resource boom.

Costs certainly matter for manufacturing firms’ competitiveness. Non-cost variables that present constraints to firms operating in Mozambique, highlighted in the 2012 MPD/DNEAP survey and found in our conversations with firms in 2014 include wage pressures relative to labor productivity, inefficient and/or expensive infrastructure and logistics, bureaucracy and governance issues, and competition with foreign suppliers.

The extent to which firms are exposed to price competition, either with global producers in export markets or from international, importable substitutes, is fundamental to firms’ potential vulnerabilities to Dutch disease. Some companies have already looked at the Mozambican market and decided that they cannot manufacture here, due to cost pressures from imported alternatives. One firm, in reaction to a possible scenario of metical appreciation, stated that it would cease manufacturing in-country and provide more cheaply sourced imported goods to its customers. While that may demonstrate the nimbleness of one firm’s management, it is not an auspicious omen for those who would like to see manufacturing, and the employment it promises, expand in Mozambique. Other firms that do business primarily with South Africa are already facing price pressures due to the rand’s depreciation, and there are indications that this is already having an impact on jobs. However, some companies whose primary costs are in imported raw materials or inputs that are minimally processed into finished goods for sale in Mozambique stated that a stronger metical would be a distinct advantage to them, allowing them higher profit margins or the ability to pass on cost savings to their customers.

These findings, more nuanced than the information that can be drawn from sample surveys, suggest hypotheses about various strategies being pursued by manufacturing companies in Mozambique to strengthen their competitive positions in a risky and rapidly evolving economy. Whether through brand creation, product differentiation, business diversification, source market diversification, business practices that offer higher value-added services to customers, or investments in the building of long-term commercial and professional relationships with clients, suppliers, and government officials, manufacturing companies utilize a range of tools to build their competitive presence and (hopefully) some measure of resilience to shocks. Whether these tools will be enough to help firms resist Dutch disease pressures, of course, remains to be seen. It is recommended that a panel of firms continue to be followed over the next several years in order to more formally test these hypotheses as the natural resource boom strengthens in Mozambique.

Another insight to emerge from this study is the dearth of labor-intensive, export-oriented manufacturing in Mozambique today. Exceptions are a few garment companies still operating in country, and the recent launch of a motor vehicle

assembly plant in Machava. Attracting foreign and domestic investments to this sector, through a combination of special economic zones to provide industrial infrastructure on par with international benchmarks, depreciated currencies, and access to large supplies of low-wage labor, was critical to the success of East Asia's structural economic transformation away from agriculture. Mozambique's industrial policy framework, indeed its overall national development strategy, the ENDE, sets out such a vision for Mozambique's medium-term future as well. Unless the pressures of the natural resource boom can be contained, such a vision may not be feasibly realized by Mozambique.

To achieve the vision of labor-intensive industrialization targeted by the ENDE will require investments in human capital (e.g. basic literacy, arithmetic, and problem-solving skills, as well as technical skills such as machine operators, mechanics, etc.); physical infrastructure (especially expanded electricity, water, sewage, road, and rail systems); productivity-enhancing technologies (or policies to facilitate firms' access to such technologies, such as tax or duty advantages or credit lines to promote capital investments); and institutions (everything from better port management to improved transparency regarding access to land) that will improve Mozambique's business environment.

It will also require setting policies – such as minimum wages – that balance considerations of workers' rights with productivity and Mozambique's competitiveness relative to that of other countries competing for investor dollars. To overcome a “silo” approach whereby each sector addresses one aspect of the larger reform, an overall reform coordination body located in the presidency, Prime Minister's office, or Ministry of Planning, tasked with pulling together these various strands in coordination with the objectives laid out in the ENDE, might be a worthwhile approach.

Beyond low tech manufacturing, of course, lies the promise of higher value-added processing. However, the many well-known challenges facing the manufacturing sector in Mozambique highlighted above will make it extremely challenging for Mozambique to attract these kinds of industries. Global competition for such investments is strong, and Mozambique's doing business indicators are simply too weak.

Policymakers always face real choices, i.e. trade-offs, in their decision-making. Mozambique's industrial policy, undergoing review at this time, should be guided by this distinction between low and high tech manufacturing and by the vision of a labor-intensive, employment-generating industrial sector. The policy should therefore have horizontal approaches to improve the business environment and encourage competitiveness across sectors as a medium-term goal, refraining from “picking winners.” At the same time, the longer term goals should be to help improve productivity over the next five to ten years, so that when the natural resource boom's effects begin to be felt, Mozambique's manufacturing sector will be ready.

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CHAPTER 3
INDUSTRIAL POLICY
DISCUSSION PAPER: AN
INDUSTRIAL POLICY FOR
MOZAMBIQUE

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January 2014

EXECUTIVE SUMMARY

Industrial development is vitally important to Mozambique. Industrialization could help create new businesses and industries, providing opportunities for the hundreds of thousands of new entrants to the job market and the rural poor who move to cities each year seeking work. This paper examines the policy choices for Mozambique by discussing other countries' experience with industrial policy and current efforts in Mozambique to aid industries as well as the economy as a whole.

Industrial policy encompasses a range of government actions and collections of policies to encourage development and production of sectors with potential for growth. Although ideas of what constitutes industrial policy can vary widely, industrial policy typically is vertical, targeting specific sectors and aiding them with subsidies, trade barriers, and other forms of support, even state ownership. But industrial policy can also be horizontal, including infrastructure spending and actions to create a fiscal, legal, and regulatory environment that is conducive to investment and entrepreneurship.

Horizontal policies tend to have the greatest chance of achieving broad-based growth in industrial sectors and generating employment. Developing key infrastructure, creating a business-friendly policy environment, and facilitating the free flow of capital, labor, and other resources would seem to make the most sense in Mozambique, especially at the country's current level of development. These policies would also aid promising new industries.

In contrast, sector-specific policy is risky. Most protection and subsidization of industry worldwide has failed to create internationally competitive firms. Too often, state resources have been wasted in creating uncompetitive monopolies or oligopolies that turn out poor-quality goods for protected domestic markets, with consumers paying the price. Also, sector-specific policies can run contrary to international trade rules. Moreover, such policies must be preceded by robust economic analysis. Developing countries like Mozambique often lack the capacity and financial resources for such studies.

As Mozambique works to develop an overall industrial policy and evaluate the economic impact of current industry-focused initiatives (e.g. purchase of fishing boats and opening of rice mills), policymakers should take into account the work embedded in the draft National Development Strategy (ENDE) as well as the Business Environment Improvement Strategy (EMAN II), which provide numerous horizontal policies that, if implemented, would help industries to develop competitively in Mozambique. It is possible to find a balance that addresses the needs of specific industries and encourages economic growth as a whole.

INDUSTRIAL POLICY FOR MOZAMBIQUE

The worldwide economic downturn that started in 2007 fueled a resurgence of interest among governments in industrial policy. This includes Mozambique, which already was seeking to industrialize. Industrialization could help create new businesses and industries, which in turn could absorb some of the estimated 300,000-350,000 people who enter the job market each year and the 100,000 or so rural poor who move to cities from the countryside in search of jobs (African Development Bank 2013). Without industries and jobs to absorb rural populations into cities, social unrest could increase in Mozambique. The debate centers on the best way to foster industrialization.

One school of thought holds that, at Mozambique's current state of development, industrial policy should focus on improving the business environment, which might encourage more private sector development and investment in various industries, especially manufacturing. Improvements in policies that make the business environment friendlier to the private sector, coupled with policies, spending, or both to encourage infrastructure development, education, and health – benefiting all of Mozambique's economy – may be more worthwhile than investments in specific sectors.

On the other side are those who advocate targeted policies aimed at supporting or even subsidizing specific industries. Without such policies and investment, advocates argue, Mozambique will never be able to develop a competitive industrial and manufacturing base. Only public investments that kick-start an industry, or policies designed to protect or even subsidize a sector, will enable Mozambique to boost growth, create jobs, compete internationally, and develop its industrial base.

To contribute to the discussion of what constitutes an appropriate industrial policy for Mozambique, this paper explores definitions of industrial policy, examines other countries' experiences with industrial policy, reviews current industrial policy work in Mozambique, and outlines considerations for defining an industrial policy for Mozambique. Even though the viewpoints discussed here vary drastically, it is possible to strike a balance that addresses the need to support specific industries and promote economic development in general.

1. DEFINING INDUSTRIAL POLICY

Embodying a government's strategy for promoting growth in manufacturing and processing sectors, industrial policy has long been understood to encompass interventions or measures that focus on promising industries. Interventions and measures, however, can also be less targeted. Dani Rodrik, a Princeton University professor, is among the contemporary advocates of industrial policy (2004).

An industrial policy intervention usually aims to enable, support, or improve the competitiveness of domestic industries. Such interventions can be targeted (vertical) or economy-wide (horizontal).

The premise underlying horizontal interventions is that neutrality should be the essential feature of government action in the economy. Governments should provide public support for economic development in all sectors: that is, provide economic infrastructure, create incentives for investment and development of human capital, and tailor the legal, institutional, and regulatory setting to generally promote economic growth. The identification of specific areas or activities to which resources should flow should be left to the market (Ciuriak 2011). Horizontal interventions focus on the general business environment and include financial support of research and development (R&D), credit availability (or the creation of development banks), tax incentives that promote certain activities (e.g. R&D or capital investment), other incentives to encourage development of transport and energy infrastructure, and activities that can benefit all manufacturers. Mozambique, for example, encourages the production of natural gas to meet the energy needs of industries (although exporting gas may hold wider economic benefit).

Many believe, however, that certain industries and companies would not exist or, where they exist, would not grow without targeted policies. This strategy of "picking winners" through vertical interventions is essentially an effort to correct market failures that keep industries from growing. Vertical interventions focus on particular industries or sectors and include financial support in the form of subsidies, loans from domestic banks, or equity participation through the establishment of public corporations or nationalization of firms or entire industries (temporarily or indefinitely); and trade measures, such as import or export restraints, antidumping or countervailing duties, nontariff measures, and regulatory exemptions (e.g. Canada does not require work permits for the film industry).

2. ARGUMENTS FOR AND AGAINST INDUSTRIAL POLICY

Proponents of industrial policy, particularly vertical policy, tend to believe the government can intervene in markets to good effect. The chief opponents can be described as *laissez-faire*, or free market, advocates. The latter might support and favor horizontal policies, such as reform of the business environment and promotion of private sector-led development as a means of economic development and job creation. In that regard, industrial policy and reform of the business environment overlap to support common goals. Focusing on those complementary areas and objectives may be a good way of moving the dialogue forward on industrial policy in Mozambique.

2.1. SUPPORTERS OF INDUSTRIAL POLICY: INTERVENTIONISTS

“Economic interventionists” argue that government can contravene free market principles by instituting policies or otherwise taking action to promote economic growth, create jobs, increase wages, control prices, address market failures, and a variety of other laudable political or economic objectives. Interventionists, for example, might urge the government to provide financial support to a firm on the verge of bankruptcy, especially if the economic disruption caused by bankruptcy outweighs the cost of support.

They might also advocate for high import tariffs or import bans in some sectors to give domestic industries room to upgrade and become more competitive against foreign suppliers, a practice known as import-substituting industrialization. Here, the rationale is that domestic industry might be capable of keeping production costs below those of foreign rivals if given sufficient protection, at least initially.

In arguing for industrial policies, interventionists often cite market “coordination failures.” The premise is that a range of complementary inputs and services from the public and private sectors, as well as simultaneous public sector investments, are necessary for an industry to be viable. The development of copper processing, for example, requires construction of smelters, sufficient electricity to power the smelters, and adequate roads to transport processed items. Without public investment in energy and transport infrastructure – or targeted industrial policies – private sector investment in the industry is unlikely. Likewise, a start-up in one industry might require simultaneous investment in other industries in the supply chain if it is to remain viable. A multinational firm developing a megaproject will likely have its own supply chain or be capable of developing related industries necessary to make the megaproject viable.

Interventionists, such as Rodrik, might also argue that government support is necessary to facilitate the establishment or expansion of industries that benefit people other than those in the industry and that improve general welfare, depending on the cost of the policy versus the intended benefit. Therefore, it is argued, the governments need targeted industrial policies to spur the necessary investment in any given industrial sector.

Picking winners – deciding which sectors or industries a government should support – is challenging. Governments must undertake and consider original research and economic cost-benefit analysis before developing such policies. Collaborative discussions between the public and private sectors, through high-level “competitiveness councils,” could aid Mozambique’s government in setting policies aimed at help firms increase their competitiveness and enhancing Mozambique’s competitive advantages. Effective policies can be designed only after through research and a robust public-private sector dialogue.

But are industrial policies the best route for promoting economic growth and job creation?

2.2. OPPONENTS OF INDUSTRIAL POLICY: LAISSEZ-FAIRE ADHERENTS

Opponents of industrial policy generally favor a laissez-faire economy in which “comparative advantage” operates freely. They believe in an economic environment in which transactions between private parties occur without undue government restrictions, tariffs, and subsidies.

The private sector and market-based economic mechanisms, they believe, do the best job of creating employment, stimulating private sector development, and increasing economic growth. If market failures occur, or if industries don’t materialize, it is because poorly designed policies keep the private sector from undertaking the desired economic activity. Improving these poorly designed policies will help to encourage investment, job creation, industrialization, and ultimately economic growth.

They believe that if these horizontal or economy-wide policies are not corrected, even industrial policies or public investments in industries will not help them be internationally competitive. Any supported industries will still be subject to the economy-wide legislation and other barriers that will add costs and keep the industry perpetually uncompetitive. The uncompetitive industries will continue to require subsidies or protection from the government, and this situation will lead to overall welfare losses to the economy.

In addition, those opposed to industrial policy argue that government officials tend to be naturally disposed to seek more power and authority and use economic interventionism to obtain these. This then leads to governments playing a direct role by establishing state-owned or subsidized enterprises, funding existing businesses to ensure their survival, or imposing restructuring.

Opponents of industrial policy believe that government can limit sector-specific industrial policies and instead set economy-wide ground rules for general business regulation as well as for labor and capital markets, and set broad national priorities and roadmaps. These enablers would help support private sector investment and promote industrial development, especially in manufacturing.

Opponents disagree with Rodrik's view that strategic collaboration between the public and private sectors can help governments design industrial policy to encourage the 'right' industries. The opponents believe that even an optimally designed industrial policy can lead a country to specialize in sectors in which it does not have comparative advantage. By specializing where comparative advantage is absent, a country diverts investment, labor, and other resources that could have been used to produce something better or more competitively in another sector. Perhaps in the case of Mozambique, the resources are diverted from activities, such as developing infrastructure, which lay the groundwork for benefiting the entire economy. Furthermore, one begins to wonder why "losers" (e.g. the industries that were not picked by government and received no support) were left out. In those cases, were the losers not politically connected enough or did not have resources to lobby officials?

In Mozambique, the constraints on a firm are typically horizontal, such as red tape, insufficient infrastructure, and limited human capacity.

2.3. A MIDDLE GROUND

John Weiss, in his 2013 paper for the Donor Committee for Enterprise Development (DCED), argues that horizontal policy interventions have strong complementarities with business environment reform. In fact, we can consider business environment reforms to be a subset of industrial policy interventions. We can see this through Mr Weiss's argument:

- [Business environment reforms aim] to reduce or remove, as much as is practical or desirable, barriers to the free functioning of markets, whether they be price controls, minimum wage legislation, restrictive regulations, administrative delays or lack of legal protection for property rights. The theoretical model behind these ideas implies that if markets are decontrolled, this will create a level playing field and allow the more efficient private firms to expand relative to the less efficient ones... Horizontal IP [industrial policy] interventions have the same goal as regulatory and legal reforms, as they are designed to make markets work more effectively by compensating for "market failures" such as lack of information and external effects, or by removing monopoly or monopsony structures. They offer incentives or public goods equally to all firms with the intention of improving the functioning of markets. Their rationale is thus directly complementary to the logic behind [business environment reforms] BER.

To the extent that Mozambique can find complementarities between their industrial policy efforts and reform of the business environment, the Mozambican economy might benefit. Most of the focus of industrial policy, as Weiss points out, should be horizontal – or policies that could potentially benefit all industries.

By promoting horizontal policies, governments may do more for encouraging industrial development than focusing on specific sectors and picking winners. For example, developing key infrastructure, creating a business-friendly policy environment, and facilitating the free flow of capital, labor, and other resources into the promising new industries, and the corresponding flow out from the declining or industries that are not industrializing (such as subsistence agriculture) may seem to make sense in Mozambique. The rationale of industrial policy under the middle-road scenario would therefore be not to protect, subsidize, and guarantee the survival of all the present firms and jobs; nor would it be to pre-select all the firms and jobs that will get government's financial favors, while expressing polite regrets to those not so favored. It is, rather, to promote a flexible, dynamic, and full-employment economy.

The Mozambique Ministry of Planning's next draft National Development Strategy (ENDE) seems to do a good job at aligning these two objectives. However, other experience in Mozambique (e.g. the recent purchase of fishing boats, channeling domestic supplies of natural gas – a potentially valuable export commodity – to develop a fertilizer industry or as direct inputs into industry, and the government directly entering into rice milling in Chokwe) seems to contradict what is written in the government's official development plan.

3. INSTITUTING INDUSTRIAL POLICY

Deciding when to institute industrial policies is important. The level of economic development of a country, along with the political environment, often can help determine the success of industrial policy. Most countries that have had successful industrial policies normally have the precursors (e.g. a business-enabling environment with policies that promote private sector competitiveness; macroeconomic stability; an open trade policy; welcoming attitude to foreign investors; functioning judicial system; developed infrastructure) to ensuring their industrial policies result in globally competitive industries. In those countries, the industrial policy was indeed a jump-start for an industry and occasionally succeeded but more often failed. Countries that lack the precursors have often wasted considerable time and financial resources trying to develop industries. This is also true of countries with the precursors.

Rodrik (2004) partially illustrates the point:

■ Imagine an economy with a well-behaved government that has done its Washington Consensus homework. Macroeconomic instability is not a problem, market interventions are minimal, trade restrictions are few and far in between, property rights are protected, and contracts are enforced. Will the type of entrepreneurship that is required to build up non-traditional activities be amply supplied? There are good reasons to believe that the answer is no.

Rodrik makes the case for a dialogue between government and the private sector to collaboratively design industrial policies – but only when all the correct precursors are in place. In developing countries like Mozambique that lack some of the necessary precursors (infrastructure, business-friendly policies, etc.), sector-specific industrial policies most likely will not work as intended. This strongly argues for the development, at least initially, of horizontal or economy-wide policies (e.g. policies that focus on the business environment, infrastructure) rather than sector-specific policies (e.g. supporting rice mills, fertilizer plants, fishing boats).

3.1. THOROUGH ANALYSIS AND STUDY NEEDED

Countries that choose to develop vertical industrial policies must conduct robust economic analyses. In developing countries, including Mozambique, the capacity and financial resources to adequately carry out such studies may be lacking, or better used for other development activities.

Should Mozambique wish to pursue vertical industrial policies, any proposals should be accompanied by an economic impact analysis and analysis of commercial viability that comprises:

- A list of the industries (winners) that are selected for aid, and an indication of why these industries were selected. This analysis should include commercial viability studies as well as realistic impact assessments of whether the current business environment, infrastructure, and human capacity requirements are available to ensure the sustainability of these industries in Mozambique.
- A list of the industries that will be harmed by the policy – for example, in the case of limiting natural gas exports, the economic consequences of receiving a lower price for natural gas used in domestic industries compared with the higher price for gas on world markets.
- Estimates of economy-wide welfare gains or losses from supporting protected industries.
- Estimates of the number of jobs saved or created in the selected industries and destroyed or jeopardized in other identified industries.
- A statement of purpose and an affirmation of the national and public interests that are sought both by saving and creating jobs in the winning industries and destroying or jeopardizing jobs in the losing industries.

The major challenge is having governments properly evaluate the costs and benefits of various industrial policy initiatives. This evaluation should be done in close cooperation with the private sector and development partners. In many cases, setting up competitiveness councils and applying agreed-upon frameworks for assessing industrial potential and using government resources to unlock that potential is necessary.

4. CASE STUDIES

In the previous two sections, we saw how horizontal or economy-wide policies can benefit all potential industrial sectors. We also saw the importance of getting the precursors of a modern economy in place should a government decide to undertake sector-specific policies. In this section, we will look at some vertical or sector-specific industrial policies.

Sector-specific industrial policy remains controversial worldwide. There have been successes, but also, as the Economist magazine pointed out in 2010, many expensive failures. Industrial policies have been designed to support or restructure old, struggling sectors, such as agriculture or textiles, or to try to construct new industries, such as robotics or nanotechnology (or in the case of Mozambique, fertilizer plants and rice mills).

4.1. SUCCESSES

US: THE INTERNET

The United States government funded the Defense Advanced Research Projects Agency, or DARPA, an agency that created ARPANET, the predecessor of the Internet. Though widely cited as the product of a successful industrial policy, DARPA does not maintain its own labs and much of its budget is contracted out in search of high-potential new concepts – DARPA works with private companies, universities, and laboratories to bring concepts to fruition. DARPA's annual budget (2013) of over 2.8 billion dollars supports more than 2,000 contracts with companies, universities, and laboratories throughout the United States. DARPA's role may be seen as horizontal because of the agency's focus on research and development and on pursuit of innovations – advanced materials, biology, weapons, and various other technology – that benefit all sectors of the economy.

MEXICO: AUTOMOBILE INDUSTRY

Mexico's experience with the automobile industry illustrates how foreign direct investment can contribute to industrial development in the host country. Mexico took advantage of horizontal improvements in the trade and business environment through reforms pushed through by the North American Free Trade Agreement (NAFTA). NAFTA required Mexico to improve its trade and business environment and provide guarantees to foreign investors, and created a certainty and predictability in the business environment that prompted massive direct investment in Mexico by US car manufacturers. European and Japanese auto manufacturers followed suit, and many domestic investors started firms that made automobile parts and components.

TAIWAN: ORCHIDS

Taiwan has traditionally grown and exported sugar, an industry that has been depressed by low international prices and for other reasons. To replace sugar crops on farmland, the Taiwanese government decided on a 65 million dollar government investment program to develop a world-class orchid industry. The government pays for a genetics laboratory, quarantine sites, shipping and packing areas, new roads, water and electrical hookups for privately-owned greenhouses, and an exposition hall – everything except the cost of the greenhouses. It also provides low-interest credit to farmers to help them build the greenhouses (Bradsher 2004). This investment has resulted in Taiwan becoming a preeminent orchid producer and host of an annual orchid fair.

CHILE: WOOD

Chile, principally during the military regime of the 1970s, intervened to create industrial policies in forestry. To help develop its pine timber industry, the Chilean government approved legal changes that protected land purchased under the scheme from subsequent expropriation. It also approved cash payments to the pine timber developers covering 75 percent of the initial cost of planting. And the government offered subsidized credit lines to forestry companies. Wood remains one of the country's major exports as seen in Chile's export data and, thus, an example of successful industrial policy.

INDIA: SOFTWARE

The Indian software industry has become internationally competitive due to selective policies by the Indian government. To help build the human capacity base, India supported five technological institutes and two management institutes. This, coupled with the introduction of trade-related industrialization policies, which allowed for duty-free imports of computer systems if importers used those computer systems to export software and services worth twice the value of the imported computers, helped the software industry off the ground. In the 1980s, the government formed a public-private software export-promotion council that looked carefully at policies necessary to continue to develop the software industry. As a result of some of the council's recommendations, India liberalized import rules for materials needed for the software industry, and software was explicitly targeted as a key sector for export promotion. India also created software technology parks (STPs), which helped provide the necessary basic infrastructure for private companies to export software. Tax breaks were given on company profits and income for entities in any free-trade zone, any software-technology park, or any special economic zone; the breaks amounted to 100 percent of the profits derived from the business (Lin 2012). These various policies combined to help India develop an internationally competitive industry.

4.2. EXPENSIVE MISTAKES

The number of unsuccessful and costly examples of industrial policy appears to exceed the number of successful cases. Many governments that nationalized industries abandoned that costly approach and shifted to deregulation and privatization. Some of the best-documented cases of forays into industrial policy come from Sub-Saharan Africa, including Ghana and Mozambique. After independence, many African countries attempted industrial policy; no Sub-Saharan African nation generated internationally competitive industries.

GHANA: FOOTWEAR

Tony Killick provides a good overview of industrial policy's failure in Ghana (2010). He discusses in great detail examples of industrial projects from the early 1960s and illustrates in one case after another how inefficient and costly they were. He shows that cost-benefit calculations were ignored and inefficient investment projects undertaken for the sole purpose of attempting to industrialize Ghana. One example was a cattle-based industrial complex:

- The footwear factory... would have linked the meat factory in the North through transportation of the hides to the South (for a distance of over 804.7 km) to a tannery (now abandoned); the leather was to have been backhauled to the footwear factory in Kumasi, in the center of the country and about 321.9 km north of the tannery. Since the major footwear market is in the Accra metropolitan area, the shoes would then have to be transported an additional 321.9 km back to the South.

INDONESIA: AUTOMOBILES

Automobile production in Indonesia dates to 1927, when General Motors began assembling and selling automobiles in the Indonesian market. With the growth, popularity, and utility of these automobiles, the Indonesian government began to recognize a strategic value in developing a national automobile industry. GM's production facilities were nationalized in 1950, but production stopped due to a shortage of foreign exchange. Then in 1968, consistent with the views of leading economists and the advice of international donor agencies, the Government strove to develop an independent industrial sector through import substitution (ISI) policies, with the automotive industry at center stage. Recognizing that automotive parts were central to the manufacture and production of automobiles, the government created trade policies that blocked imports of automotive parts in order to encourage production in Indonesia. The effort resulted in the domestic production of only a few of the items, for example tires and headlamps, scheduled for use in the assembly of automobiles.

In 1993 the Government introduced incentives, which aimed to encourage local automobile manufactures to produce automobile parts locally. The incentives came in the form of lower import duties on components, subcomponents, semifinished materials, and raw materials. Again, these efforts had minimal impact on development of a domestic automotive industry.

Finally, in 1995, the Government made a fundamental policy shift away from protectionism and toward a market-oriented approach to encourage sector-specific industrial development through technology transfer, best-management techniques, and capital inflows through foreign direct investment. This policy was soon abandoned, when on February 19, 1996, the Indonesian Ministry of Trade and Industry announced a new "National Car Project" to foster development of an indigenous automotive industry. Under the Project, automobiles produced locally by an Indonesian company using an Indonesian brand name and using only locally produced parts would be considered a national car. Companies given the national car status by the Indonesian Government were exempted for three years from paying import duties on imported parts used to produce the national car. Consumers did not have to pay a luxury-goods tax when purchasing the national car. Immediately after the new policy was announced, the Government awarded the national car status to PT Timor National (TPN), a company owned by Tommy Suharto, the youngest son of President Suharto, who had no experience

in the automotive industry and also did not have a manufacturing plant to produce the national car. TPN received a 690 million dollar loan from the Indonesian government to build a production facility. None of these efforts resulted in a national car or even a domestic automobile industry.

After the 1997 Asian financial crisis, Indonesia was forced to move toward a free market-focused economic policy, opening the door for foreign capital into the auto industry in Indonesia. None of these industrial policies helped Indonesia to develop an automotive industry. Only when Indonesia began to improve its business environment and pursue market-oriented policies to entice foreign investors to establish an industry did Indonesia begin to industrialize the automotive sector (Institute for Trade & Commercial Diplomacy).

MOZAMBIQUE: TEXTILES

Mozambique has made numerous attempts at intervention in industry. A case in point is Mozambique's costly attempt at developing a textile industry in the 1980s through Têxtil de Mocuba, Texmanta, and Textafrika (Cockroft 2004).

Têxtil de Mocuba, a huge complex of buildings in the city of Mocuba, was conceived as becoming the largest producer of fabric on the African continent, but never became operational. It now sits dormant, with 148 brand new and never-used Sulzer looms, considered the best looms in the world and now costing more than 20 million dollars each.

Texmanta in Pemba is another example. Twenty-four wide Somet Master looms sit rusting outside the Texmanta factory. Wiring suggests that there were originally 48 looms.

Textafrika was the largest functioning mill in Mozambique, a vertically integrated cotton mill with an installed capacity of 12 million linear meters a year. The mill spun up to 30,000 tons of lint annually using local cotton from concessions, which it held, and employed 3,000 or more workers.

Today, none of these mills are operational. In addition, Belita, a garment producer with investment from Mauritius, closed its doors in 2009 because it was unable to remain competitive due to red tape, including labor issues and customs delays for importing material used in garment production. Belita, which had been producing garments for name brands like Gap in the US, had taken advantage of preferences under the US Africa Growth and Opportunity Act (AGOA), and had been provided industrial free zone (IFZ) status in Mozambique.

It would be easy to present many pages of similar examples from developed countries as well as from developing countries and Sub-Saharan Africa. In France, the discontinued Concorde supersonic passenger jet (developed with the British) was a technical success but economic failure, and France's nuclear energy program has been marred by costly mistakes which likely could have been avoided through increased international private sector involvement. The US bailout of Chrysler in 1979 was costly to taxpayers. Requirements to protect US shipping interests were found in 1999 to cost the US economy far in excess of the benefit to US shipbuilders (US International Trade Commission). Yet developed economies can better absorb the failures than less-developed ones. What can be said is that most government protection and subsidization of industry did not create internationally competitive firms. On the contrary: those forms of intervention have led to uncompetitive monopolies or oligopolies producing poor-quality goods for protected domestic markets. Consumers typically pay the price for these distortions.



5. IMPLICATIONS FOR TRADE

Sector-specific industrial policies can run contrary to many current international trade rules and commitments Mozambique has made in the World Trade Organization (WTO), the Southern African Development Community (SADC), and other bilateral agreements. Mozambique should take account of these commitments when deciding on industrial policies. To avoid negative economic consequences, policymakers should analyze the possible implications of government subsidies or investment in commercial activities before committing to either.

For example, Chile offered subsidies for new exports then had to eliminate the subsidies after the WTO (1997) found them to be noncompliant. Similarly, export bans have recently been in vogue, such as on minerals (Indonesia), and wheat (Russia and Argentina), but these run contrary to the free trade principles in the WTO. Mozambique banned exports of cashews and considered banning exports of cotton to promote local value-added industries. Many times, these policies can lead to negative value added and lower income to those needing it most – farmers.

State-owned Enterprises (SOEs) and subsidies have also been receiving considerable attention from the WTO. SOEs may receive different kinds of subsidies, and government ownership may make it easier to obtain benefits. Government provision of equity capital can result in an enterprise owned or partly owned by government being considered as an SOE according to WTO rules. The equity infusion can be considered as a form of subsidy, triggering countervailing under WTO. Government purchase of stock in a company can also be treated as a subsidy, especially if payment for that stock exceeds market prices. Any subsidies received, either by SOEs or any private enterprise, fall under general WTO subsidy rules as outlined in the WTO Agreement on Subsidies and Countervailing Measures (SCM).

Under the SCM, a subsidy can be categorized in one of three categories: prohibited, actionable or non-actionable. If a country is suspected of providing subsidies, a second country may request that a Dispute Settlement Body (DSB) panel be established to investigate. If a member country is found to be providing a subsidy, the WTO may recommend that the country withdraw the subsidy without delay. If an actionable subsidy is found to have harmed another member, the subsidizing member must take steps to remove the adverse effects or must withdraw the subsidy (Xie 2002). The implications of this rule for SOE commercial transactions could be profound. In the case of the Chokwe rice mills, or a much larger investment in the commercial fishing boats, a WTO decision could require Mozambique to alter its contract, for example, with the french supplier of the fishing boats.

As the next section shows, vertical or sector-specific industrial policies that use government investments could run contrary to the international trade rules to which Mozambique has committed to adhere. The result could lead to disputes under WTO.

6. POLICY IN MOZAMBIQUE

Mozambique's past and current industrial policies include horizontal and vertical measures, following international experience, have largely failed, not because they were poorly designed, but because they were, for the most part, not implemented. Recent efforts to develop industrial policy have produced mixed results, as we will see below.

Mozambique's Industrial Strategy Policy (1997). This Industrial Strategy Policy, approved by the Council of Ministers through Resolution number 23/97 of 19 August 1997 sets out a reasonable industrial policy for Mozambique. It encompasses numerous horizontal policies designed to generate industrial development. For instance, on the role of the state, the policy states:

- “The role of the State is essentially to guide, regulate and monitor the development of industry and to create the conditions that stimulate industrial activity. The intervention of the State is achieved through: the establishment of an industrial policy; the creation of a conducive environment which facilitates investment and production; and the implementation of a system of incentives to economic activities including the construction of infrastructure, auxiliary investment especially in training, infrastructure and industry support services.”

The policy goes on to talk about a number of horizontal initiatives to aid in industrial development on industries in Mozambique, such as creation of industrial free zones, promoting quality, development of human resources, improving the legal framework for the industrial sector, and improving access to imports. It would serve the current debate well to carefully revisit Mozambique's Industrial Strategy Policy of 1997 as it provides a suitable framework for promoting horizontal policies to spur industrial development.

Ministry of Industry and Commerce (MIC) 2007 Industrial Policy. Mozambique's most recent industrial policy was developed by MIC in 2007. It targeted particular sectors (e.g. textiles and apparel) and generally focused on a range of horizontal policies designed to address the competitiveness of the chosen sectors. However, failure to make real progress on implementing the main points of the industrial policies (e.g. customs reform, inspections, labor issues) meant that the required reforms to the business environment were never carried out, resulting in the closure of some textile and apparel firms.

MITUR's Tourism Policy. Another example of horizontal policy is the Ministry of Tourism's (MITUR) identification of key investment sites, known as anchor sites as they will provide the initial investment and serve as an anchor to attract other investors in the tourism industry. Elaborate plans were developed with support from the International Finance Corporation (IFC) and USAID to create resort development companies and put in the horizontal policies (business environment, infrastructure, etc.) for investors to quickly invest in tourism in Mozambique. However, these plans ran into several obstacles, such as not being able to secure clean and clear title and an inability to adequately value the land.

MIC's current industrial policy proposals. MIC is developing another industrial policy. It is understood that Fundo para Ambiente de Negócios (FAN) project will support MIC in development of the industrial policy. The focus of the policy is as yet unclear, but two main points are certain: (1) any horizontal policies included in the new MIC industrial policy must have high-level commitment to implement – failure to do so may result in waste of resources; and (2) any vertical industrial policies included in the new MIC industrial policy have a high chance of costing the government valuable resources.

MPD's current National Development Strategy (ENDE). The Ministry of Planning and Development (MPD) has recently developed a draft National Development Strategy (the July 2013 draft), which was being discussed and made final as this discussion was being written, and which proposes an industrial policy for Mozambique over the next 20 years. ENDE has the objective of economic development through diversification. The draft starts with outlining a few key horizontal "pillars" for industrialization: development of human capital and infrastructure; and organization, harmonization, and institutional coordination for implementing the policies. The draft focuses on four priority sectors for industrialization: (1) agriculture and fisheries; (2) transformative industry; (3) mineral extractive industry; and (4) tourism.

The draft focuses on a few key horizontal policies to realize the plan: private incentives for the mobilization of investment and development of small and medium enterprises (SMEs) in the sectors; and public investment. And the unpublished draft states on page 10, point n. 36, that "to achieve these objectives, it is necessary to improve the business environment through the development of infrastructure, access to finance, increased efficiency in public administration, and macroeconomic stability of the country."

The draft appears to be a good and positive attempt at supporting a range of horizontal measures designed to improve the overall conditions for a range industrial sectors. Even at the sectoral level, ENDE appears to propose reasonable policies to support the development of potentially competitive sectors for Mozambique.

Other industrial policy initiatives

1. Outside of ENDE, there appear to be some initiatives or proposals for industrial policies by individual government agencies. Perhaps ENDE aims to bring a cohesive industrial policy and strategy to Mozambique and coordinate some of these proposed disparate industrial policy measures.
2. Development Bank. The creation of a development finance institution (DFI) – or development bank – aims to overcome the difficulty in accessing finance in Mozambique. However, creation of the DFI in itself will not adequately address constraints in the financial system in Mozambique, which prevents private sector banks from taking risks, reducing interest rates, and making finance more readily accessible. Instead, efforts should focus on (a) improving the legal and regulatory environment in the finance sector and (b) encouraging market-focused tools for improving access to finance.
3. Natural gas for industry. A major issue with natural gas revolves around revenues from gas to be used as cash (e.g. royalties and taxes) or in kind (direct use of gas for industry). Proponents argue that in-kind is an easy and inexpensive way to support industrial development through the direct use of gas in various industries. It is argued that this would create a value-added industry and expand economic development. Cash, on the other hand, could support the development of a host of other horizontal industrial policies that could generate conceivably better returns. Cash could be used for infrastructure development; for human resource development; and for general activities to improve the business environment. The additional cash might be used for health and education activities. Or it might be used for general civil service reform and an improved pay structure for civil servants, which would attract and retain higher-caliber civil servants.
4. In-kind use of natural gas creates a number of issues that need to be resolved, such as how the natural gas could be deployed in the economy, at what price, under what mechanisms, and to whom. One sector targeted for development using natural gas is the fertilizer industry. But without detailed economic analyses and commercial viability studies, it is as yet unclear whether fertilizer could be a competitive industrial sector for Mozambique.
5. Decisions on cash use involve whether revenue should be set aside in a sovereign wealth fund or development bank, or used in ongoing government operations. Either way, use of the cash from royalties and taxes might be of more benefit to Mozambique than potentially costly mistakes at picking industrial winners and promoting potential downstream industries such as fertilizer.
6. Chokwe rice mills. The Ministry of Agriculture (MINAG) has provided a small factory capable of processing four thousand metric tons of rice a year. MINAG argued that Chokwe needs three more similar units to be able to process all the rice harvested. MINAG believes that increasing the availability of processing would encourage farmers to grow more rice, increasing the region's competitiveness. The reality, according to the individuals who run the mills, is that they really have little idea of how to run the mills.
7. Instead of creating the conditions for the rice mills to be internationally competitive and sell the mills to private sector investors, the government decided to buy the three additional mills. Business environment, infrastructure, and human capacity issues, to name a few, may potentially render these mills ineffective and uncompetitive, leading to more-expensive rice for Mozambique citizens and continued government subsidies and protectionist measures to keep the mills operating.
8. If rice production and industry are important to Mozambique, surely horizontal policies designed to attract private investment would be a better option than direct government investment in the sector.
9. Fishing boats. The government of Mozambique announced in 2013 the creation of Ematum, which is 61 percent owned by government interests, and the 300 million dollar purchase of 30 boats by the company. The idea of this industrial policy is to use commercial fishing from the boats to generate revenues to support naval operations and

patrols of Mozambican waters. Again, this is an example of a vertical industrial policy, apparently unsupported by commercial viability studies or related analysis of the eventual competitiveness of the sector. The venture, should it proceed, will be potentially another costly example of an industry that will require heavy government subsidies to run and keep in operation, subsidies that could be potentially better used in other horizontal initiatives such as reform of the business environment.

7. CONSIDERATIONS FOR MOZAMBIQUE

So what should an industrial policy for Mozambique look like? As shown in this paper, industrial policy can be complicated. Narrowly defined, industrial policy can comprise much directed, sector-specific, or vertical, policies or initiatives that cover state support (e.g. subsidies or trade barriers) or even state ownership. Alternatively, industrial policies can include a very broad set of economy-wide, or horizontal, policies that could potentially benefit all industrial sectors (e.g. business environment reform, investments in infrastructure). MPD's ENDE appears to be making a good start at organizing the principals of an industrial policy. But that raises the question of why MIC also wants to pursue a vertical strategy?

A few main points outlined in this paper could be used to discuss how Mozambique should work to develop industrial policies. Key points include:

- Vertical industrial policies have often failed. Vertical, sector-specific industrial policies have failed more often than succeeded. Should Mozambique decide to pursue industrial policies without a strong private sector involvement and support and economic and commercial viability (and related economic analyses) in areas such as state intervention in rice mills or fishing boats, or requiring natural gas use in fertilizer production or restricting exports of natural gas, these endeavors will very likely be added to the long list of costly failures in industrial policy. And they will divert resources from putting in place the business-environment policies, infrastructure, and health and education systems necessary to help Mozambique grow economically.
- A strong business environment matters if a country wants to successfully pursue vertical industrial policies. Most industrial policies that have succeeded have been in developed countries, or in those with a good business-enabling environment with policies that promote private sector competitiveness, possessing macroeconomic stability; an open trade policy; a welcoming attitude to foreign investors; functioning judicial system; and developed infrastructure.
- Sound economic analyses are required to effectively pursue industrial policies. Economic analyses are required to help decide which sectors a country can competitively pursue and the economic and social effects of pursuing those policies. Such due diligence and economic analyses are often expensive. With limited human and financial resources, a country may be better off allocating them to other development and poverty-reducing activities.
- Vertical industrial policies often run contrary to WTO and other trade commitments. Export restraints, subsidies, or state control of commercial activities can often lead trading partners to raise issues in international forums, such as the WTO, and perhaps lead to retaliatory actions, such as suspension of trading preferences or implementation of countervailing duties.
- Horizontal policies designed to improve the overall business environment are preferable to vertical industrial policies at Mozambique's current stage of development. Improving the enabling conditions for all sectors of Mozambique's economy creates an economic environment in which all potential industrial sectors could flourish and thrive. Investments in horizontal policies can also spur additional local and foreign direct investment in industrial sectors. Without a well-functioning business environment, related infrastructure, human capacity, and other pillars of an economy, the ability of vertical policies to produce economically competitive enterprises will be limited and will usually entail costly economic losses.

- Commitment to implement horizontal policies is essential. Horizontal policies can be difficult to design and implement. Mozambique has devised horizontal policies in the past, which have failed to develop industries. For example, the Ministry of Industry and Trade developed a detailed industrial policy for the textiles and apparel sector in 2007. The policy entailed a host of horizontal measures intended to spur the development of the sector. However, failure to implement the plan and reform business-environment related issues in the textile and apparel sector led textile and apparel firms (e.g. Belita) to close. The same is true for tourism-related industrial policies. Both USAID and the IFC have invested significant resources in trying to spur anchor tourism sites throughout the country, which have failed to materialize and bring international investors. The main reason for failure is that horizontal policies (e.g. the business environment and infrastructure) have not been conducive. Focusing on addressing horizontal industrial policies would be likely to have far more impact than any vertical measure.
- Setting up a high-level competitiveness council can help address issues of sectoral competitiveness. We've seen that in many countries with successful industrial policies, such as Chile, high-level competitiveness councils have been established, with support from the president and key economic ministers, combined with domestic and international private sector representatives, and that these are often a necessary first step in looking at both horizontal and vertical policies.
- Integrating into global value chains or production linkages to multinationals already operating in Mozambique may be a good option for encouraging industrial development. If Mozambique tries to target pieces of global value chains or link to multinationals already operating in Mozambique, industries will start to develop. Furthermore, if the Mozambican private sector cannot make these linkages, it points to the simple fact that more effort needs to be spent on addressing factors that prevent these, which are typically issues surrounding the business environment. Mozambique needs to address various constraints on the business environment and foreign investment that keep the private sector from tapping into value chains. Positive steps include: (a) diversification of the product mix into a wider array of new and more sophisticated goods and services, as well as diversification of export destinations; (b) moving up the quality ladder in existing export products (adding to demand); (c) improving productivity in existing export sectors (reducing costs); and (d) upgrading to higher-level tasks within existing production networks.

7.1. POSSIBLE NEXT STEPS

As Mozambique works to develop an overall development policy as well as evaluate the economic impacts of various current industrial policy initiatives (fishing boats, rice mills, etc.), policymakers should take into account the ENDE draft as well as the EMAN II, which provide numerous horizontal measures that, if implemented, would help industries to develop competitively in Mozambique. Policymakers can also consider setting up a high-level competitiveness council, made up of ministers, key private sector representatives, and donors, to engage in dialogue and help identify and implement policies that could help to develop competitive industries in Mozambique. At the same time, policymakers should again carefully consider the economic impacts of some of the current industrial policy initiatives currently underway to ensure that scarce financial resources are directed to activities that can generate meaningful returns to the citizens of Mozambique.

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CHAPTER 4.1
LOCAL CONTENT
MOZAMBIQUE BUSINESS
LINKAGES REVIEW:
AN OVERVIEW OF KEY
EXPERIENCES, ISSUES AND
LESSONS

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October 2012

EXECUTIVE SUMMARY

Mozambique has attracted Foreign Direct Investment (FDI) following the signing of the peace agreement in 1992. The country's biggest breakthrough was achieved in the mid-1990s when the large-scale aluminium smelter - Mozal was established. This project sent a strong signal to the global business community that Mozambique was open for investment and capable of hosting this type of mega project. Following this investment, other mega projects, mostly in the extractive industries have generated large FDI inflows amounting to around 8.4 billion dollars between 1997 and 2009. Experience has shown that the extractive industry can have significant economic, social, physical and environmental impacts in host countries and how such operations are regulated can determine whether their impacts are positive or negative. Globally, there is increasing demand from stakeholders such as donors and local business communities, for corporations in this sector to deliver positive impacts. Similarly, expectations about the impact of the mega projects on Mozambique in terms of growth, development and poverty reduction have been very high.

This paper was commissioned within this context with the following objectives:

- To critically review experiences, challenges, issues and lessons learnt in business linkages in Mozambique, in particular documenting experiences of those companies that have successfully participated in such programs, highlight risks.
- To benchmark against successful projects in the region, especially South Africa.

The methodology adopted involved collecting of primary data through a series of interviews with a broad range of stakeholders. Secondary source data came from reviewing literature from various multilateral organizations, academics, and mining companies.

The main findings and conclusions of the review can be summarized as follows:

- Mozambique has several programs and/or activities aimed at supporting SMEs; however, they cannot all be classified as business linkages programs. This report focuses on collaborative business linkages, which are explicitly built up by firms out of mutual interest.
- IFC's Mozambique SME Linkages Program (Mozlink) is regarded by many as the country's flagship program, and is therefore the main focus of this review. Rio Tinto Coal Mozambique (RTCM) and VALE's linkages programs which are still at design stage; RTCM and VALE are among the biggest investors in the Tete coal mining region.
- In addition, there are several companies exploring for gas including Anadarko and ENI and each of these is promising to establish programs or linkage activities to support local SMEs.

Having identified inability of local private sector to meet international trade standards as the main constraint to an effective collaboration with local SMEs, Mozal established the Small and Medium Enterprise Empowerment and Linkages Program (SMEELP) in 2001. Following the success of this, Mozlink I was jointly established by IFC and Mozal in 2003. In 2007, Mozlink II which included Sasol, SABMiller and Coca-Cola was established to build on what was achieved by Mozlink I.

The Mozlink approach consisted of five phases: 1) Preparation; 2) Assessment I and Workshop I; 3) Execution of SME Improvement Plan; 4) Assessment II and Workshop II; and 5) Evaluation.

With an investment of about 1 million dollars by IFC (International Finance Corporation) and partner corporations, the program facilitated 53 million dollars in incremental sales for local SMEs; 15 million dollars in the value of contracts signed by SMEs; and created 336 formal jobs. Mozlink was regarded as successful by almost all the respondents; however, several areas that did not work well were highlighted as follows:

- Commitment of corporations' senior management - there was a higher level of commitment shown by Mozal's management during the SMEELP and Mozlink I projects, however, there was a notable decline in the commitment during Mozlink II when multiple partners joined the program.
- Managing expectations of SMEs throughout a project's life span proved challenging as a number of entrepreneurs viewed joining the program as a guarantee of contracts from corporations. When their expectations were not met, a number of them lost interest and their commitment to the program was affected.
- However, SMEs that joined the program to benefit from the technical assistance (TA) have shown great progress with most diversifying their markets.
- Access to finance (A2F) - almost all respondents indicated that this aspect of the program did not work well. This is also complemented by the findings of the independent evaluation of Mozlink II done by Ernst & Young (E&Y). In general, access to finance for SMEs is a challenge in most developing countries. In Mozambique, lack of collateral and formal credit histories coupled with high interest rates has resulted in the structural exclusion of most SMEs from accessing finance from commercial banks. Overall, there was little contact between the program and local commercial banks to drive this component of the program.
- Most entrepreneurs appreciated the training on safety, health, environment and quality. This was primarily delivered by staff from the various corporations on the program. This seemed to have worked quite well, but is a costly and time-consuming exercise for corporations.
- Lack of coordination and/or strategic approach towards SME support programs between technical and business service providers was noted as hampering the efficiency and impact of the program. There was limited effort aimed at improving the company as a whole – via value chain approach.
- The selection of SMEs by corporations was not always considered to be transparent – sometimes weak SMEs were selected.
- Coordination of linkages programs – there is limited documented evidence of efforts to coordinate linkages programs to leverage experience and resources.
- Program sustainability – the handover process of Mozlink II to CPI (Centre for Investment Promotion / Centro de Promoção de Investimentos) by IFC is underway, however. The general view is that the program has lost momentum and uncertainty about CPI's capacity to host the program is a major concern among key stakeholders.

Other country-specific factors affecting the success of linkages programs were identified as follows:

- The country's weak private sector characterized by a large informal sector.
- Limited or lack of human capital – recent progress in education has been insufficient to create a pool of skilled workers to meet the growing demand. A 2008 survey of enterprises revealed that the worker's level of education has increasingly become an obstacle to doing business in Mozambique, especially for foreign and export oriented firms.
- Mozambique's weakness in physical infrastructure is another major obstacle to the country's development. Efforts to upgrade physical infrastructure are under way but the poor state of the road and railroad networks constrains economic growth by impeding the integration of regional markets.

- Mozambique has a weak manufacturing sector rendering it difficult for local SMEs to maximize opportunities offered by the technologically advanced operations of the multinational corporations (MNCs).
- Finally, the policy environment is not conducive for the development and growth of local SMEs.

Taking the above conclusions into account, the following recommendations are made:

- Government should invest in improving and strengthening the private sector, especially promoting SMEs and human capital. To do this, a skills needs analysis of current and pipeline investments are necessary and would enable the country to use the prevailing investment boom to build skills that are relevant in the respective industries.
- The need to invest in the country's manufacturing sector is urgent and is an important step towards building the competitiveness of local SMEs.
- The country should take advantage of its proximity to South Africa by encouraging Joint Ventures (JVs) between more established South African companies and local SMEs. JVs would also offer an opportunity for skills and technology transfer.
- In addition, there is an opportunity for other stakeholders, especially donors, to work jointly with corporations such as RTCM in designing and supporting implementation of linkages programs.
- CPI's role in promoting business linkages in Mozambique is critical. Effort is needed to build the agency's capacity to manage linkages programs including exposing key staff to best practice models via study tours and so on.
- Stakeholders should develop realistic expectations about the benefits and impact of linkages programs. This is necessary to avoid disappointments. In particular, more attention should be given to SMEs who are more prone to join linkages programs in order to access contracts/business. SMEs should be encouraged to develop a long-term view mindset with regard to linkages.
- Provision of technical services by corporation staff is a costly exercise. Therefore, an opportunity exists for donors to initially fund training of independent consultants to offer these services.
- Improved access to finance for SMEs is necessary for their growth. Corporations should consider adopting the Anglo Zimele social venture capital Model (Annex B). Alternatively, partnerships with development partners and donors should be considered to leverage resources and share risks.
- Coordination of linkages programs should be encouraged in order to reduce duplication of efforts; promote leveraging of resources and sharing of experiences, resulting in maximization of the impact of the programs.
- Future linkages programs should ensure sustainability; plans are included at the design stage as this would insure a smooth transition of the program at the exit stage.
- Additionally, the government should continue implementing reforms aimed at improving the country's investment in climate; however, priority should be given to the development of policies and regulations which primarily focus on small investors and local SMEs.

Finally, as a general rule, expectations should remain realistic, as creating strong backward or forward linkages with export-oriented mining companies has proved difficult in most countries.

BACKGROUND AND CONTEXT

INTRODUCTION

Mozambique is located in south-eastern Africa, bordering the Mozambique Channel, between South Africa and Tanzania. It has been among the world's fastest-growing least developed countries over the past two decades. The growth averaged 7.0 per cent per annum in 1993-1999 followed by average growth of 8.1 per cent in 2000-2008¹. This growth has been mainly triggered by an increase in the global demand for minerals such as coal as well as increasing demand for new sources of energy. The latter has encouraged exploration of oil and gas of the coast of East Africa and Mozambique as the country is endowed with vast natural resources – including coal, titanium, natural gas and large underdeveloped agricultural land.

In the mid of 1990s, Mozal started its activity, and that was a strong signal to the global business community that Mozambique was open for foreign investment and capable of hosting mega projects². Between 1997 and 2009, the country had received FDI of more than 8.4 billion dollars.

Mainly, the extractive industry can have significant economic, social, physical and environmental impacts in host countries. How mining operations are managed can determine whether their impacts are positive or negative³. There are much expectations directed towards high-profile mega projects in Mozambique, and about their impact on the country in terms of poverty reduction.

Primary data was collected through a series of semi-structured interviews with a broad range of stakeholders using interview guidelines. Secondary source data came from reviewing literature from various multilateral organizations, academics, and mining companies.

1. MAIN FINDINGS

1.1. OVERVIEW OF LINKAGES PROGRAMS

There are several programs and/or activities taking place in Mozambique to support SMEs, however, they cannot all be classified as business linkages programs. In general, while all commercial interactions between firms could be classified as business linkages this report focuses on collaborative business linkages⁴, which are explicitly built up by firms out of mutual interest. This occurs when enterprises (big business and SMEs) join a formal or informal group with the aim of bringing about a win-win situation for the parties involved.

IFC's Mozambique SME Linkages Program (Mozlink) is regarded by many as the country's flagship program, and is therefore the main focus of this paper.

1.2. MOZLINK BACKGROUND

Mozlink was established as a follow up to a similar initiative started by the Mozal Aluminium smelter investment project. Mozal was the country's first mega-project, with an investment of about 2 billion dollars by a consortium of companies led by BHP Billiton.

¹ UNCTAD's Investment Policy Review (IPR), 2010-2011

² A "mega project" is legally defined as any investment exceeding \$500 million regardless of economic activity. UNCTAD's IPR report, 2010-2011

³ World Bank and International Finance Corporation: 2002. Large Mines and Local Communities: Forging Partnerships, Building Sustainability.

⁴ Promoting business linkages, Fr. Dr. Schulenburg and Sabine Becker, GTZ, 2006

Mozal identified private sector weakness and the inability of local business to meet international trade standards as the main constraints to an effective collaboration with local SMEs. These constraints included SMEs inability to (i) participate effectively in bidding, tendering and post-tendering, relatively complex processes, (ii) meet stringent technical, quality, safety and environmental requirements, (iii) meet deadlines and ensure a regular supply, and (iv) set up appropriate financial management and organizational internal controls.

SMEELP (2001–2003)

In response to the lack of capacity among local SMEs, the Small and Medium Enterprise Empowerment and Linkages Program (SMEELP) was designed with the view to provide growth opportunities for SMEs and ensuring sustainability of the model through skills transfer to the Linkages Unit hosted by CPI. This program was developed by Mozal and IFC in collaboration with beneficiaries, based on their experience in dealing with local SMEs, during the first phase of plant construction. The program's main components included: (i) contract identification for local SMEs, (ii) SME selection, and (iii) training and mentoring. The approach targeted Mozambican firms employing less than 100 employees.

MOZLINK I (2003-2007)

The success of the SMEELP encouraged Mozal to develop a new program – Mozambique SME Linkages Program (Mozlink I), together with the Africa Project Development Facility (APDF), Projecto de Desenvolvimento Empresarial (PODE) and CPI on behalf of the Government of Mozambique. The results were also encouraging⁵.

MOZLINK II (2007-2010)

Mozlink II, which was developed with IFC technical assistance, built on the success of the previous two linkages programs and aimed at pursuing the same objectives and work methodology established by its predecessors. Four corporations, Mozal, Sasol, SAB Miller and Coca-Cola joined the Mozlink II program.

PROGRAM APPROACH

The Mozlink approach consisted of five phases⁶: 1) Preparation; 2) Assessment I and Workshop I; 3) Execution of SME Improvement Plan; 4) Assessment II and Workshop II; and 5) Evaluation.



⁵ 2010 report by E&Y - independent evaluation of Mozlink II

⁶ This section is derived from Jaspers, Frans-Jozef; and Mehta, Ishira. 2008. Developing SMEs through Business Linkages—The Mozlink Experience. A Manual for Companies, NGOs, and Government Entities, Version 1. 0. International Finance Corporation

■ Phase 1: Preparation

This phase consists of finding internal champions and incorporating program values into the company's charter. Partners are then selected, and a steering committee is created to monitor the implementation and progress of the program. A strategy that integrates essential components of the program (e.g., procurement, finance, program monitoring and evaluation) is then designed. SMEs are selected and visited by program members to find out about their interest in the program. Finally, technical (company employees) and business (external consultants) mentors, who will coach and guide the SMEs through the program, are identified, recruited and trained.

■ Phase 2: Assessment I and Workshop I

The program's training and mentoring components are designed following the collection and analysis of baseline data on the SMEs' technical and business skills. The resulting curriculum is applied in one-day group training sessions, then during one-on-one mentoring sessions. A six-month improvement plan for each SME is developed, to be monitored by the SMEs and the mentors to ensure SME program ownership and commitment. Finally, a workshop is conducted to present to SMEs the status of their current skills (identified in the first assessment), and to provide them with an opportunity to meet with the mentors to discuss their improvement plan.

■ Phase 3: Execution of the SME Improvement Plan

Using the curriculum developed in phase 2, one-day workshops are delivered to the SMEs, who also implement their improvement plan and are encouraged to be in regular contact with their mentors.

Mentors continue to be available after the program ends. Business and technical mentors evaluate progress and performance to-date three months into the implementation plan, using the same questionnaire used in the first assessment. Progress is then compared against the baseline data, and insufficient progress is addressed during subsequent meetings between the SMEs' management and the mentors. Finally, a steering committee meeting examines the progress of the overall program.

■ Phase 4: Assessment II and Workshop II

At the end of the implementation plan, data is collected and compared with previous data, with a focus on improvement and SMEs' willingness to improve. A second workshop is conducted during which the mentors present the results of the second assessment to the SMEs. The next steps are outlined and focus on the SMEs' need to diversify to avoid dependence on the lead company. The SMEs are also informed that an evaluation of their new organizational structure and business model will take place after two years and that mentorship will be available after the end of the program.

■ Phase 5: Evaluation

In this phase, changes in the procurement patterns of the lead company vis-à-vis local SMEs – change in employment, change in the quantity and size of contracts, change in turnover, and change in the number of client companies (client diversification) are measured. The end-line data collected during this phase are compared against baseline data. Because some changes are only visible a couple of years after the end of the program, subsequent evaluations are needed to get an accurate sense of its effects.

1.3. MOZLINK II - LESSONS, EXPERIENCE AND ISSUES

The following issues were highlighted as main lessons and experience from the Mozlink program.

COMMITMENT OF MNCS TO LINKAGES – CORPORATE SOCIAL RESPONSIBILITY VS BUSINESS STRATEGY

A report on business linkages best practice experience⁷ highlights the following as a demonstration of a corporation's management commitment to a linkages program:

- A clear business case is needed for a sustained and long-term commitment of the corporate investor. Real sustainability is therefore commercial in nature, not philanthropic. This is because SME linkages programs are costly, risky and time consuming for companies.
- Clear responsibilities and leadership - This entails corporate leadership, vision and resources, including the use of company expertise and personnel such as the integration of line managers and procurement into the monitoring and evaluation of the linkages program.

Mozal showed this level of leadership and commitment, especially during the SMEELP and Mozlink I programs. However, this declined for Mozlink II when multiple partners joined the program. It should be noted that the partners were from different industry sectors – for example, Coca-Cola and SABMiller are not from the extractive industry. This could pose a potential challenge especially in terms of managing the expectations of all partners.

MANAGING EXPECTATIONS OF LOCAL SMES

Managing expectations of SMEs throughout a project's life span has proved challenging in most linkages programs. The following issues were highlighted with regards to the Mozlink program:

- Most SMEs viewed joining the program as a guarantee of contracts from corporations. In contrast, the view of corporations was that the program was to help build the capacity of local SMEs and improve their competitiveness in the marketplace.
- Most SMEs did not approach the program with a long term view, i.e. to improve their capacity in all relevant areas to position them to access opportunities beyond the corporations on the program.
- SMEs that joined the program with the primary goal of accessing contracts showed little commitment to the training or mentorship program. In certain cases, owners/management delegated junior staff and relatives (not employed at the company) to attend the training workshops.
- The mismatch in the entrepreneurs expectations and what the program was offering negatively affected the attitude of some. Some of the entrepreneurs saw training as a time wasting activity given the opportunity cost of using the time to look for more business. Some even dropped out of the program due to this.

However, SMEs that joined the program to benefit from the technical assistance (TA) have shown great progress with most diversifying their markets⁸.

This experience underscores the fact that having clear objectives for linkages programs is important but not sufficient on its own. Clearly communicating program objectives to all stakeholders, especially SMEs, before they join the program is an important step towards management of expectations of all concerned parties.

⁷ Report by Jasper, Franz-Josef and Ishira Mehta, 2007

⁸ Highlighted during the interview with ICC

ACCESS TO FINANCE FOR LOCAL SMES

Access to finance (A2F) is necessary for SME development and growth. Almost all respondents indicated that this aspect of the program did not work well. This is also complemented by the findings of the independent evaluation of Mozlink II carried out by Ernst & Young. In general, access to finance for SMEs is a challenge in most developing countries. In Mozambique, lack of collateral and formal credit histories coupled with high interest rates has resulted in the structural exclusion of most SMEs from accessing finance from commercial banks. On the other hand Micro Finance Institutions (MFIs) tend to concentrate on micro enterprises, leaving a gap for small-medium companies.

While there was some evidence that training offered by Mozlink had raised SMEs profiles to enable them to seek access finance, there was no formal program links with local banks⁹. Further, SMEs expectations around IFC's role in providing finance needed more clarification.

Other IFC linkages programs such as the CSSDP (Copperbelt SME Suppliers Development Program) had invited local banks to be part of their steering committee. This allowed banks to access information on promising SMEs that they would target for potential financing, resulting in more than 1.5 million dollars being accessed by SMEs from local commercial banks. Most remarkably, South Africa's Anglo Zimele program model has an A2F component at the core of its success.

TRAINING AND MENTORSHIP PROGRAM

Most entrepreneurs appreciated the training on safety, health, environment and quality. This was primarily delivered by staff from the various corporations in the program. This seemed to have worked quite well, but is a costly and time-consuming exercise for corporations.

Mozal's Building Engineering Abilities in Mozambique (BEAM) initiative – carried out via the Engineering Council, helped to build the capacity of local suppliers in HSEC (Health Safety, Environment & Community) and has continued to run one session per month for its suppliers. This was also implemented as part of the Mozlink II program with positive feedback from local suppliers who participated.

However, areas needing improvement were raised as follows:

- Lack of coordination and/or strategic approach towards SME support programs between technical and business service providers. The absence of joint planning and implementation of technical assistance was deemed as time-consuming for SMEs. Joint planning or coordination is necessary due to links between technical and business development services.
- There was limited effort aimed at improving the company as a whole – via value chain¹⁰ improvement.
- Lack of willingness by SMEs to commit time and money to training or capacity building activities.
- The selection of SMEs by corporations was not always considered to be transparent – sometimes weak¹¹ SMEs were selected.
- Time allocated for mentorship was deemed inadequate – 16 hours/2 days for each SME was considered as a light touch approach which limited the impact of the training on SMEs.

⁹ Independent Evaluation of Mozlink II by E&Y

¹⁰ Value chain' refers to all activities and services that bring a product (or service) from conception to end use in a particular industry – from input supply to production, wholesale and finally retail. It is so called because value is being added to the product or service at each step. Taking a 'value chain approach' to economic development means addressing the major constraints and opportunities faced by business at multiple levels of the value chain. ACDI/VOCA

¹¹ SMEs not meeting the selection criteria

COORDINATION OF LINKAGES PROGRAMS

Mozambique has several programs or initiatives targeting SMEs. Some are funded by donors while others are implemented by corporations and government agencies. There is limited documented evidence of efforts to coordinate such programs to leverage experience and resources. While this is a problem in most developing countries, sharing lessons would have helped other programs to improve significantly.

PROGRAM HANDOVER AND SUSTAINABILITY

The handover process of Mozlink II to CPI by IFC is underway. A memorandum of understanding has already been signed by both parties. While the consultant had no access to the document, it is understood that the document spells out the capacity building activities needed for CPI to continue with Mozlink III. The general view is that the program has lost some of its momentum and a major lesson from the experience is that sustainability strategic plans should be agreed during the design phase to allow for smooth program transitioning.

PROGRAM ACHIEVEMENTS – COSTS VS BENEFITS

Business linkage activities can be difficult to monitor and evaluate for a variety of reasons. One challenge is choosing appropriate metrics, for both business and development impact. Another is distinguishing output metrics – such as the number of local contracts awarded – and outcome metrics such as the increase in per capital income attributable to a linkage program. Complexity and the lack of counterfactual – the inability to know what would have happened in the absence of a linkage program – complicate the task of establishing causality¹².

The costs associated with implementing a business linkages program are primarily a function of the adopted model; skill levels/cost of key staff; program structure, such as the number of staff, location of offices – if located at a corporation's office, rentals may be forfeited if the corporation is making an in-kind contribution.

IFC and partner corporations' initial budget of 1,170,000 dollars was revised to a final investment of 1,012,153 dollars in Mozlink II program of which close to 700,000 dollars was expended by the program¹³. Over its three-year time frame, the program achieved the following results (Table 1)¹⁴: Mozlink also had an HIV/AIDS component which is not included in this report.



¹² Beth Jenkins, Anna Akhalkatsi, Brad Roberts, and Amanda Gardiner – IFC International Business Leaders Forum, and the Fellows of Harvard College

¹³ E&Y independent Evaluation of Mozlink II

¹⁴ These Indicators are tracked on quarterly basis for all IFC linkages program

TABLE 1: SUMMARY OF MOZLINK II KPI'S AND ACHIEVEMENTS

Indicators	Planned	Achieved
<i>Outputs</i>		
# of workshops, training events, seminars	30	51
# of participants in workshops, training events, seminars	400	551
# of entities/SMEs receiving in dept advisory services (mentorship)	17	45
# of entities receiving advisory services (training)	80	77
# of reports completed	6	45
<i>Outcomes</i>		
# of entities that implemented recommended changes	40	36
Value of contracts signed by SMEs (dollars)	15,000,000	15,000,084
# of signed contracts	N/A	N/A

Indicators	Planned	Achieved
<i>Impact</i>		
# of entities accessing funding	N/A	
Total incremental sales revenue amount (dollars)	20,000,000	53,032,000
Amount of funding facilitated by mentoring	2,000,000	0
# of formal jobs created	700	336
# of entities reporting performance improvements	70	36

The program cost, according to the budget, was 1.01 million dollars (for 3 years). The intent of the MNCs to continue funding the activities may imply that the benefit they derived from Mozlink exceeded their (approximately 0.5 million dollars) contribution in the three years.

This is before taking into account the 53 million dollars sales revenues for the SMEs, some of which may have otherwise collapsed in the global financial crisis.

Further, any additional benefits arising from the continuation of the program activities by the MNCs after the program exit would arise because of the initial investment into the Mozlink program.

While the absence of baseline data on some of the indicators restricts the possibility of assessing what might have been the “without Mozlink II” position of the SMEs, including the local BDSPs, a crude cost benefit analysis would seem to indicate that the benefits from the Mozlink II program are certainly more than the cost or investment.

A top line comparison of Mozlink II with other similar IFC linkages programs also shows the program performed relatively well, with the exception of the A2F component (Table 2).

SUMMARY OF E&Y INDEPENDENT EVALUATION OF MOZLINK II

E&Y was contracted by IFC to conduct an independent evaluation of the Mozlink II program. E&Y’s evaluation of the program aimed at providing stakeholders with an assessment of the design and the business model adopted by the program, the first results regarding desired outputs and program outcomes, evaluate what worked and what did not work and recommend new direction or areas of focus of the program in 2010¹⁵. The study critically reviewed achievements in key areas including – program Objectives; Relevance and Design; Efficiency and Effectiveness; Implementation Model; Impact and Sustainability. The main findings and recommendations of E&Y’s evaluation, which are relevant to this review, are summarized in Table 3.

Component/Indicator	Mozlink II	CSSDP (Zambia)
Program budget/cost	1.01million dollars	1.2 million dollars
# of entities/SMEs receiving in-depth advisory services	45	35
Value of contracts signed by SMEs	15 million dollars	21.5 million dollars
Total incremental sales revenue	53 million dollars	18.5 million dollars
Formal jobs created	336	135
Total finance facilitated for local SMEs	0	1.5 million dollars

¹⁵ Ernst & Young report, 2010 - An the Independent evaluation of Mozlink II

TABLE 2: MOZLINK II Vs COPPERBELT SME SUPPLIERS DEVELOPMENT PROGRAM (CSSDP)

COMPONENT		MAIN FINDINGS	RECOMMENDATIONS
Program objectives	⇒ SME training, capacity building & Mentorship	<p>Provided both training & mentorship; Mentorship effective but benefited fewer companies</p> <p>Provided technical training via corporations; benefited fewer companies as it requires more time & effort</p>	<p>Negotiating between SMEs and SPs to agree on best time for training</p> <p>More rigorous screening of SME training participants</p>
	⇒ Internalize linkages process in industry	Corporations positively affected & keen to continue program albeit weak senior management commitment	Improve corporations' senior management's commitment to linkages
	⇒ Increase A2F for SMEs	Some evidence that training had raised SMEs' profile to access finance; but no formal program links with local banks	Establish or work with tailor-made SME funds – VC funds, guarantee funds

However, this comparison should be viewed within different country contexts especially in terms of existing policy and legal framework, and the general business environment prevailing in each respective country.

TABLE 3: FINDINGS¹⁶ OF THE INDEPENDENT EVALUATION OF MOZLINK II BY E&Y

COMPONENT		MAIN FINDINGS	RECOMMENDATIONS
			Improve coordination with other A2F programs in IFC
Relevance & Design	⇒ Relevance	Program was and is relevant given the need to train SMEs and help them access opportunities in the market	
	⇒ Design	Program duration short to achieve desired results	Achievement of all program objectives require a longer duration – at least 5 years
		SME selection by corporations not very transparent	The selection of companies should result in a public notice by which all interested SMEs could apply
		SME representative body not included in steering committee	Inclusion of SMEs in the Steering committee as they are the focus of the program
Efficiency & Effectiveness	⇒ Monitoring & Evaluation	Limited data availability on participant companies	<p>Ensure completion of baseline study prior to start of program</p> <p>More funds directed to program activities (60-70% of budget)</p>

¹⁶ For a better appreciation of the E&Y findings, it is recommended to refer to detailed report for a better appreciation of the E&Y findings, it is recommended to refer to detailed report

COMPONENT		MAIN FINDINGS	RECOMMENDATIONS
	⇒ Staff	Limited human capacity – especially service providers; also small PMU team	Ensure coordination with other complementary programs
	⇒ Project duration	Short project duration to achieve desired results	Longer duration more realistic for achievement of desired results
Implementation Model		Implementation Model has been maintained since SMEELP and Mozlink I	
Impact		Program has improved SME competitiveness, increased job creation and is seen as a best practice model with potential to be sustained by corporations	
Sustainability		Great potential for sustainability of program—great interest from donors, SMEs, government, and corporations	Encourage cost-sharing model and recommend to corporation

1.4. COUNTRY-SPECIFIC CONSIDERATIONS FOR LINKAGES PROGRAMS

The presence of numerous MNCs in Mozambique does not automatically guarantee the formation of meaningful business linkages programs. A number of country-specific factors that promote or inhibit the development of linkages programs were highlighted as follows:

THE PRIVATE SECTOR

The country's private sector remains weak and the economy is characterized by a large informal sector¹⁷. There are a large number of obstacles, including of a regulatory nature that limit investment and the development of local SMEs. Additionally, the vast majority of Mozambicans remains dedicated to subsistence farming and has not made the transition to commercial agriculture, a crucial first step toward creating a market economy.

EDUCATION

The government has put education at the center of its poverty-reduction strategy with access to primary schooling improving significantly in recent years. However, access to secondary and tertiary education remains weak. Recent progress in education has been insufficient to create a pool of skilled workers to meet growing demand. A 2008 survey of enterprises revealed that the worker's level of education has increasingly become an obstacle to doing business in Mozambique¹⁸, especially for foreign and export oriented firms as 23 and 27 per cent of these respondents cited this issue as a major constraint, respectively.

¹⁷ Enterprise Survey Report

¹⁸ The World Bank survey presented in Mozambique's 2009 Investment Climate Assessment ranked the workforce education as the 9th greatest obstacle to doing business in 2008, where it came in 12th place in 2003

¹⁹ Mozambique IPR Report, 2011

INFRASTRUCTURE AND SKILLS

UNCTAD (United Nations Conference for Trade and Development) Investment Policy Review (IPR) report¹⁹ for Mozambique highlights weaknesses in physical infrastructure and low levels of human capital among major obstacles to Mozambique's development. Efforts to upgrade physical infrastructure are under way but the poor state of the road and railroad networks constrains economic growth by impeding the integration of regional markets. Furthermore, access to telecommunications and electricity is still limited in rural areas. The development of human capital is another major challenge based as highlighted in the preceding paragraph.

A WEAK MANUFACTURING SECTOR

Mozambique has a weak manufacturing sector rendering it difficult for local SMEs to maximize opportunities offered by the technologically advanced operations of the TNCs (Transnational Corporations).

POLICY AND REGULATORY ENVIRONMENT

To address Mozambique's development challenges, the Government has adopted various multi-year strategy plans. The Action Plan for the Reduction of Absolute Poverty (PARPA) is one of the country's key strategies which have guided economic policy for many years. Government has also defined a number of sectoral strategies (including for SME development) that together with PARPA guide Mozambique's economic policy. The first PARPA was implemented from 2000 – 2005. PARPA II which focused more and gave a higher priority to private sector development was launched for the 2006 – 2009 period. It sets out to improve the business climate to encourage domestic and foreign investment as one of its top priorities²⁰.

Government's 2010-2014 five-year plan recognizes the increasingly important role private investment plays in Mozambique's economic development and affirms that it will continue with its initiatives to attract private investment, both domestic and foreign. The plan seeks to attract investment that will help develop Mozambique's rural areas including in infrastructure, agribusiness, fisheries, forestry, tourism, mining and export-oriented manufacturing industries. To this end, it proposes as priority actions:

- conducting research and feasibility studies to evaluate investment opportunities in new areas of business with a focus on manufacturing.
- promoting business linkages between large corporations and SMEs particularly in agriculture, agro-industry and fishery.
- expanding the special economic zones and industrial parks schemes in the country. Specific macroeconomic and sectoral indicators are used to set benchmark goals.

Despite these good intentions and efforts, the general perception of SMEs is that Mozambique's policies are biased towards mega projects and foreign companies. Mozambique needs to address more urgently the challenges confronting its business sector in general and its SMEs in particular. A strategy that looks beyond mega projects as engines of development is called for and the focus of government policies needs to be better balanced towards domestic investments and SMEs.

²⁰ IPR (UNCTAD, 2011), PARPA II calls to "improve the business and labor climate in Mozambique in order to: (i) encourage domestic and foreign investment; (ii) facilitate formalization of the economy; and (iii) contribute to creation of high-quality jobs".

Mozambique has limited experience in mining when compared to countries such as Zambia and South Africa which have had many years of building relevant skills in this sector. The country should take lessons from countries in which business linkages initiatives have had some successes, while ensuring that such policies are tailor-made to Mozambique's own development context. It is generally accepted that the South African Government's policies and regulations, including sector codes and industry charters, have laid a strong foundation for the facilitation of linkages programs.

2. BEST PRACTICE IN BUSINESS LINKAGES

2.1. QUALITIES OF BEST PRACTICE LINKAGES PROGRAMS

There is much literature documenting best practice lessons in business linkages. Emphasis has been generally placed on local spending as a key indicator underlying the benefits created for local economies. This, however, has limitations since local spend statistics are usually reported at an aggregate level. Detailed analysis of the data in order to establish where and how this spending has occurred often highlights a one-sided impact of mining TNCs' presence on local economies.

Key features of best practice in linkages projects from the global experience are summarized below²¹:

- Program design must occur before implementation of the investment project. The earlier the design is made then the greater the lead-time to expand the range of potential investments and sectors. In particular, decisions taken at the project identification and planning stages have a disproportionate impact on the type of linkages developed.
- A clear business case is needed for a sustained and long-term commitment of the corporate investor. Real sustainability is therefore commercial in nature, not philanthropic. This is because SME linkage programs are costly, risky and time consuming for companies.
- Success (or lack thereof) is a function of synergies (or blockages) between the core business of the company and the broader developmental priorities of the government, especially between corporate strategy and infrastructure planning in operating areas for mining firms.
- A dedicated unit, or at the very least a contracted intermediary, is needed for facilitating integration into local supply chains, as this requires continual work tied to the day-by-day realities of the company's core business. This will serve to integrate linkages program objectives with business strategy.
- Clear responsibilities and leadership is required. This entails corporate leadership, vision and resources, including the use of company expertise and personnel such as the integration of line managers and procurement into the monitoring and evaluation of the linkage program.
- Extensive coaching is required for local SMEs to meet standards and become fully integrated into supply chain opportunities. Program design must therefore carefully consider significant interventions in skills and training, such as business incubators.
- Local SMEs must be commercially viable ex ante or offer convincing investment opportunities. The continual goal of the mining company is to reduce the dependence of the SME on its demand and to maintain its sights on a clear exit strategy. This includes time specific goals, targets and monitoring.
- Start with realistic and delineated boundaries that can then be scaled up. Clear communication and investment visibility is required as community expectations must be managed.

Anglo Zimele – Anglo American Group's enterprise development program – is a pioneer of best practice in this area and a case study is attached as Annex B.

²¹ Jasper, Franz-Josef and Ishira Mehta (2007).

²² 2011 Mozambique Investment Policy Review document by UNCTAD.

3. CONCLUSION AND RECOMMENDATIONS

3.1. CONCLUSIONS

Recent huge investments made by multinationals mostly in Mozambique's extractive industries sector present a great opportunity to design and implement linkages programs. In principle, the majority of such mega projects have also shown interest and/or willingness to engage in linkages initiatives with local SMEs. Although it is still too early to determine the impact of some mega projects, there is a general perception of disappointment in the country, particularly regarding job creation and business linkages²².

The potential for developing linkages programs is to a great extent undermined by several factors which require urgent attention by government. They include the following:

- Weak private sector characterized by a large informal sector; and a vast majority of Mozambicans who remain dedicated to subsistence farming with limited capacity to become commercial farmers;
- Limited human capital or a shortage of the type of skills needed in the constantly evolving market dictated largely by the requirements of new investments;
- Weaknesses in physical infrastructure was cited among factors limiting local economies from accessing opportunities presented by mega projects;
- Weak manufacturing sector which renders it uncompetitive, given the proximity to well developed manufacturing firms from South Africa;
- Mozambique does not have any policies targeted at promoting entrepreneurship and SME development in the country, including policies to promote access to finance by SMEs;
- Government has little or no incentives to encourage corporations to invest in local business development, linkages, vocational training and entrepreneurship;
- Institutional weakness in key Government agencies such as the CPI which is mandated to oversee the development of local enterprises and industry in relation to foreign investment is cause for concern. CPI has little or no influence on the type of CSI (Corporate Social Investment) packages developed by investors. It is not involved in early negotiations with investors in the extractive industries.

There is general consensus that IFC's Mozlink program has laid a good foundation for future linkages programs in Mozambique. These lessons must inform the design of future linkages program in Mozambique. The following conclusions are worth taking note of:

- Mozal's senior management team had expressed a higher level of commitment during the SMEELP and Mozlink I projects, when compared to the commitment of senior management during Mozlink II. This may underscore the negative effect of having a multiple partner program, especially where corporations involved are from different industry sectors. Management's commitment can significantly influence the form (demand or supply-driven) taken by a program. In the same vein, Mozlink which began as a demand-led program slowly lost this momentum during the later phase.
- Setting clear program objectives and ensuring they are communicated to all stakeholders, especially SMEs at program design stage is an important step towards managing stakeholder expectations. It is also a key ingredient of an effective and impactful program.
- The business development services, mentorship and technical support were beneficial, with technical support from corporations - especially Mozal's HSEC training, however, the time allocated to all sessions was deemed inadequate.

- Access to finance was and remains challenging for SMEs. It was noted that this aspect of the program was not given due attention as there was little interaction between the program and commercial banks.
- The coordination among linkages programs is non-existent, missing an opportunity to leverage resources and share experiences.
- The sustainability plan for Mozlink III is in the process of being finalized between IFC and CPI. An MOU (Memorandum_of_understanding) has been signed by the two parties. However, questions were raised around the appropriateness of CPI to manage the program. The general perception is that the program has lost some momentum as only two of the four corporations, Mozal and Sasol, have signed cooperation agreements. Coca-Cola and SABMiller are yet to do so.

3.2 RECOMMENDATIONS

Taking into account the conclusions above, the recommendations are as follows:

- Government should invest in improving and strengthening the private sector, including taking deliberate efforts to promote the growth of SMEs. Government should also invest in improving the physical infrastructure and skills (human capital) demanded by corporations. This implies collecting data and information on skills needs among corporations, and then setting up relevant vocational training institutions, or building the capacity of universities and colleges to include such courses in their curricula. Mozambique needs to use this investment boom to build skills that are relevant in the respective industries especially the extractives sector. This requires adopting a long-term view mindset as benefits may only be visible after five or more years.
- The need to invest in the country's manufacturing sector is urgent and is an important step towards building the competitiveness of local SMEs.
- The country should take advantage of its proximity to South Africa by encouraging Joint Ventures (JVs) between more established South African companies and local SMEs. JVs also offer an opportunity for skills and technology transfer.
- In addition, there is an opportunity for other stakeholders, especially donors, to work jointly with corporations in designing and supporting implementation of linkages programs. A good example is RTCM which is looking for a partner to support the implementation of their planned linkages program.
- Given CPI's role in promoting business linkages in Mozambique, concerted effort is needed to build the agency's capacity to manage linkages programs. This may entail exposing key staff to practical applications of best practice models (e.g. study tours to visit successful programs), as well as building their technical skills via training. Building their capacity in negotiation skills to improve their engagement with investors should also be prioritized. There is an opportunity for donors and development partners to support CPI with above capacity building needs.
- Adopting a demand-driven approach in designing linkages programs is important since it encourages joint planning and attracts the commitment of corporations. Understanding the needs of corporations would enhance chances of selecting right SMEs, or offering the right intervention packages once a gap analysis is completed.
- Stakeholders should develop realistic expectations on the benefits and impact of linkages programs. This is necessary to avoid disappointments. In particular, more attention should be given to SMEs who are more prone to join linkages programs in order to access contracts/business. SMEs should be encouraged to develop a long-term view mindset with regard to linkages. While contracts are necessary, focus should also be on improving their capacity (management and technical, etc) to meet requirements of corporations on the program and to position them better to access contracts from other corporations.
- Whereas positive feedback was obtained on benefits of business development services, mentorship and technical support, time allocated to the sessions should be increased to achieve more impact. Provision of technical services

by corporations' staff is a costly exercise. Therefore, an opportunity exists for donors to initially fund training of independent consultants to offer these services.

- Improved access to finance for SMEs is necessary for their growth. Corporations should consider adopting the Anglo Zimele social venture capital Model. Alternatively, partnerships with development partners and donors should be considered to leverage resources and share risks. Other models such as Vale's Inove program in Brazil should be considered as alternatives.
- Improving coordination among linkages programs should be given some attention and is necessary to reduce duplication of efforts; promote leveraging of resources and sharing of experiences, resulting in maximization of the impact of the programs.
- Future linkages programs should ensure sustainability; plans are included at the design stage as this would insure a smooth transition of the program at the exit stage; and the design should take into account or consider all the main lessons and issues from the independent evaluation of Mozlink II²³, while paying attention to recommendations made in various reports including this one.
- Finally, the government should continue to implement reforms aimed at improving the country's investment in general, to maintain the momentum of attracting FDI. While doing this, government should also prioritize development of policies and regulations which primarily focus on the development of local SMEs. Developing regulations to deal with specific challenges facing SMEs, such as lack of access to finance, is critical to improve the growth of SMEs. Finally, Mozambique should adopt proactive policies to maximize linkages between mining companies and the rest of the economy.

As a general rule, expectations should remain realistic, as creating strong backward or forward linkages with export-oriented mining companies has proved difficult in most countries, especially since coal is not a resource that can be subject to local transformation²⁴, but synergies should be developed wherever possible. In particular, there is strong potential for synergies in infrastructure development (e.g. transport and electricity). Proactive linkages and outsourcing programs should also be encouraged. The most important opportunities should be to involve local businesses and communities in the provision of relatively low value-added services in the short term, while progressively building towards the establishment of a more elaborate network of engineering and mining-related services.

²³ E&Y Independent Evaluation of Mozlink II report.

²⁴ UNCTAD's Investment Review policy report for Mozambique, 2011.

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ANNEX: ANGLO ZIMELE – A CASE STUDY OF BEST PRACTICE

Anglo Zimele is an Anglo American's enterprise development and investment initiative fund which creates and develops commercially viable and sustainable small and medium enterprises (SMEs) by providing empowerment opportunities for Historically Disadvantaged South Africans (HDSA). Over the past 20 years, the initiative has become a catalyst for emerging black business, with the knock-on effect being sustainable job creation and socio-economic development in predominantly rural and peri-urban mining communities.

Anglo Zimele operates five Funds as follows:

- The supply chain fund focuses on procurement and business development opportunities for black-owned and managed SMEs within Anglo American Group's supply chain.
- The anglo american khula mining fund manages mining-related investments as a joint initiative with Khula Enterprise Finance Limited, a government-owned entity that promotes SME development.
- The community fund supports entrepreneurs and small businesses in the communities in which we operate. This is achieved by means of loan finance and hands-on guidance and support from our network of Small Business Hubs.
- The green fund targets investment opportunities that specifically play a role in mitigating environmental risks and improving the long term environmental welfare of communities. Initiatives that receive funding from the Green Fund could contribute to sustainable development by many means such as reducing carbon emissions, energy and water consumption, or improving waste and emissions management.
- Olwazini Fund is meant for micro businesses – training

The difference - While there are numerous linkages programs in many countries around the globe, few have received the attention accorded to the Zimele project. A downfall of most linkages models, especially those implemented in sub-Saharan Africa is that they fail to deal with lack of SME bankability in the region. Like most LDCs, SMEs in Mozambique are structurally excluded by commercial banks. Factors such as lack of collateral, limited or unreliable formal credit histories, and excessive interest rates work against local SMEs. Micro Finance Institutions (MFIs) also tend to focus on micro businesses further diminishing funding availability for SMEs. This implies that the importance of integrating an Access to finance (A2F) component in linkages models, such as Mozlink, cannot be overemphasized.

The incorporation of an A2F component (development finance) in Anglo Zimele's model is a key departure from other models. This involves providing social venture capital - both debt and equity - to finance commercially viable SMEs within and beyond the mining supply chain. In addition, business development support and training is offered to SMEs. Similar to conventional or standard VCFs, Fund Managers sit on the boards of the SMEs to guide their management. And the fund has a clear exit strategy. Anglo Zimele has 31 SME hubs attached to Anglo's business units in mining sites across South Africa. The hubs provide networking services for SME beneficiaries as well as business development support in the key areas of financial management and accounting, law, corporate governance, management and marketing.

Key success factors – In 2008, IFC and Anglo Zimele prepared a report to highlight the uniqueness of the Anglo Zimele program. The following were highlighted as success factors of the model:

Equity stake by fund – The fact that the investment fund takes the risk of taking an equity stake in the SME is a major departure from the traditional approaches adopted in other models, creating an incentive for the fund to take more interest in the day to day operations of companies it invests in.

Unsecured loans – The model provides flexible financing mechanisms for SMEs in the form of unsecured loans, when deemed appropriate.

Co-sharing of risks – By encouraging the entrepreneur to have a stake in the company, risks are co-shared. Flexibility – The model is not rigid, i.e. debt-equity ratios are flexible and can be designed to suit the investment.

Hand-holding/incubator approach – An integral part of the model is provision of business development support and transfer of technical skills.

ANGLO ZIMELE'S FINANCIAL PERFORMANCE

According to the joint IFC-Zimele report²⁵, between 2004 and 2007, the Fund had successfully invested in over 150 companies. A snapshot of its financial performance during this period is shown below:

- Total investment: 3.2 million dollars
- Anglo Zimele Financial Performance 2004-2007 (ended Dec 31)

A SNAPSHOT AT KEY PERFORMANCE INDICATORS OF THE ANGLO ZIMELE FUNDING MODEL

	Total	Supply Chain Fund	Anglo American Khula Mining Fund	Community Fund	Olwazini Fund
Number of transactions	1,408	44	20	1,272	72
People employed	19,560	7,648	1,014	10,675	223
Turnover-ZAR millions	2,404	1,047	491	847	19
Funding-ZAR millions	548	103	164	280	0.62
Female entrepreneurs supported	36%	25%	35%	36%	42%
Youth supported	48%	11%	25%	49%	50%
Companies	1,035	44	20	900	71
Repeat transactions with same companies	373	0	0	372	1
Total	1,408	44	20	1,272	72
Average loan repayment rate		86%	90%	73%	89%
Cost per job ZAR	28,016	13,467	161,735	22,229	2,780

<i>Description</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007 (est.)</i>
<i>Income</i>	<i>2,744</i>	<i>1,256</i>	<i>898</i>	<i>2,021</i>
<i>Overheads & Direct Expenses</i>	<i>-1,030</i>	<i>-802</i>	<i>-854</i>	<i>-1,727</i>
<i>Net Profit</i>	<i>1,714</i>	<i>454</i>	<i>44</i>	<i>294</i>

CHAPTER 4.2
**ASSESSING POLICY OPTIONS FOR
STRENGTHENING LOCAL CONTENT
IN MOZAMBIQUE**

Zachary Kaplan
September 2013

EXECUTIVE SUMMARY

Mozambique finds itself at a unique junction in economic development. New gas deposits found offshore have the potential to bring significant increases to public revenues through natural gas extraction and exports. This adds to ongoing investments oriented at extracting and exporting Mozambique's coal and other minerals. This raises the question of how the Government of Mozambique will work with the private extractive companies to ensure that the benefits of these investments flows to the local private sector and helps improve the overall business environment in Mozambique. The best case scenario would result in a growth of competitive SMEs providing services to the extractive industry as well as other related service sectors in the economy such as hospitality and logistics.

Local content, narrowly defined as the percentage of a product whose added value originates domestically (within the country) or more apt in the case of Mozambique as the purchasing of goods or services from a local supplier, remains to be clearly defined and its policy shaped in Mozambique. Instead, one finds divergent spurs of policy and law that treat local content throughout different government ministries. Nor is there consensus on the role of the government in supporting local content, the role and responsibility of the private sector and the operational platform from which these two will cooperate to achieve success.

Mozambique has three main options moving forward on how to treat local content. First, the Government can choose to do nothing and by default permit various ministries to potentially pursue their own local content approach. Secondly, the Government can decide to enact a local content specific law that would specify particular local content targets by industry or sub-sector. Thirdly, the Government can use this opportunity to begin by composing a local content policy framework that would define the parameters of local content in Mozambique; shaping the government's approach to supporting local content while maintaining focus on improving the overall business enabling environment and considering how the government will work with the private sector and defining roles and responsibilities across key actors in the local economy. Each option carries with it advantages and disadvantages that will directly impact market development.

This paper provides an overview of the potential impact of the new gas and mining revenues examining the existing legal and policy framework for local content in Mozambique. It then reviews examples of other local content experiences in the region in South Africa, Angola, Ghana, and Nigeria and outside the region in Norway and Trinidad and Tobago. The paper highlights the strengths and weaknesses of these experiences and the lessons learned that Mozambique can use in selecting a way forward. Finally, the paper makes recommendations on a way forward for Mozambique regarding local content while stressing that any action must underscore a continued focus on improving the business enabling environment.



INTRODUCTION

Mozambique has been increasingly relying on foreign direct investment to exploit its natural resources in gas and mining. From 2008 onwards, the state has benefitted from greater revenues as the extractive industry has broadened from coal to now include significant investments in gas and other minerals. Between 2008 and 2010, government revenues increased from around 3.8 million dollars to 55.5 million dollars, a 93 percent rise ¹ and clear indication that the benefits from these investments are starting to reach the government. These sums, however, are mere fractions of the revenues the country is expected to receive over the next several decades as more extractive industry projects move from the exploration to production. As of December 2012, there are 44 extractive companies officially registered with Mozambique's Extractive Industry Transparency Initiative (EITI) National Secretariat with more known to be operational but not yet contributing official data; there have been over 100 exploration licenses issued in the last three years ².

The government has already undertaken meaningful reforms to improve the governance of this sector. In 2008, the Ministry of Mineral Resources initiated the process of obtaining EITI compliance. By 2012, EITI officially recognized Mozambique with this designation. Similarly, the Government has increased its focus in recent legislation on strengthening local business linkages with business in the extractives sector. Its 2011 PPP (Public-Private Partnerships) legislation and the 2012 accompanying Regulations both make explicit mention of requirements for private companies to help develop Mozambique's local enterprises and markets ³.

TABLE 1: MOZAMBIQUE MINING STATISTICS, 2008-2011

	2008	2009	2010	2011
No. EITI Registered enterprises (mining, oil and gas)	6	31	44	--
Mining Revenue Reported (million dollars)	8.5	39.6	58.5	--
GDP (billion dollars)	9.9	9.7	9.3	12.6
FDI (billion dollars)	559	896	1000	2100
Exports of goods and services (% GDP)	32	25	26	29
Imports of goods and services (% GDP)	46	43	45	46

Source: WDI 2012, EITI

The Government is also in the process of revising its mining, petroleum and tax laws to establish a more equitable profit-sharing fiscal structure, strengthen the governance arrangements supporting these sectors, and clarify the public and private sector's roles in exploiting and managing these resources. It is within this atmosphere of developing improved fiscal and governance frameworks for the booming extractive industry in Mozambique that the Government is also exploring options to support local content development. Specifically, the Government of Mozambique is interested in identifying successful ways to use the new sources of economic growth around the extractive industries to invest in and build up local SMEs and create jobs in the economy.

¹ EITI Report, 2012.

² National Petroleum Institute of Mozambique, 2013.

³ Regulation of the Law about Public-Private Partnerships (PPP, Large-Scale Projects (LSP) and Business Concessions (BC) 2012 and Law on PPP, LSP, and BC 2011.

“Local content” (LC) narrowly defined refers to the percentage of a product whose added value originates domestically (within the country). A more common definition of LC, sometimes referred to as Local Procurement (LP), is the purchasing of goods or services from a local supplier⁴. While there is no clear and unified definition of LC in Mozambique, current dialogue focusing on local content leans in the direction of defining LC as the purchasing of goods or services from local suppliers.

LC initiatives are not entirely new to Mozambique neither to economies with a heavy economic reliance on natural resource extraction. Around the world, resource-rich countries have found creative ways to leverage private extractive companies’ capital and expertise to build up local industry and labor markets. The results have been mixed and have varied according to the regulatory enabling environment, government vision, private sector participation and the ability to identify the most promising opportunities on which to focus.

In the recent past, the Government of Mozambique has cooperated with private companies like Mozal and with the IFC to pilot and scale-up business linkage programs that touch on the fundamentals of the local business development objectives called for by local content initiatives. There are also ongoing programs in the making with Vale, Rio Tinto, Anadarko, and ENI⁵.

Currently, most local content requirements are embedded in individual contracts for mining, oil and gas exploration, extraction and production. Each tends to touch on similar aspects of local content such as rates of local labor employment and some local supply chain strengthening activities. Yet the scopes for each vary greatly.

In an attempt to improve the governance of the sector, leverage the projected increase in foreign direct investment set to occur in the extractive industry in Mozambique, and to facilitate greater inclusive economic growth in the local markets supplying goods and services to these private companies, the Government of Mozambique is now exploring policy options to explicitly stimulate LC development. These options range from LC specific legislation and regulation to no immediate action at all.

What is certain is that any option for LC, including no action at all, will have serious consequences on the political economy of the country and development of the extractive industry moving forward. For example, LC specific laws and regulations could be successful in satisfying local political expectations but have unintended economic distortionary effects. Too much regulation and protection of local goods and services can drive prices up and create an uncompetitive business environment for investment. Governments must also be careful not to extend long-term subsidies to local business and industries that create unreasonable expectations and become impossible to dismantle or eliminate when the local market reaches a competitive level.

There is a substantial amount of international experience with local content laws, policies and regulations. Overall, the experience is inconclusive about the long-term effects of using LC initiatives in building and expanding local product supply and associated jobs. These experiences will help inform the development of policy recommendations to the Government of Mozambique on the advantages, disadvantages and design of local content policy options in Mozambique taking into considerations the specific political-economy and market forces already in play.

⁴ IFC, A Guide to getting started in local procurement, 2011.

⁵ USAID, Mozambique Business Linkages Review: An Overview of Key Experiences, Issues and Lessons. USAID SPEED. October 2012.

1. NATURAL RESOURCES AS A NEW SOURCE FOR LOCAL ECONOMIC GROWTH IN MOZAMBIQUE

Mozambique is on course to experience a transformational change over the next decade due to its boom in natural resource extraction, specifically in coal and gas. What began as exploration contracts five years ago has turned into impressive discoveries of natural gas off the northeast coast and larger reserves of coal and other heavy metals around Tete and other regions in the country. Seen through the lens of economic growth for the country these discoveries have transformed the discussion of Mozambique's economic development moving forward.

Priority is now placed on figuring out the best way to manage the new sources of revenues for the state, how to best invest this money into the core pillars of the economy such as infrastructure, health and education, and how to ensure that the investment tied to the extractive sector helps stimulate local market growth, SME development and creates jobs for locals. While only a handful of companies have moved from exploration to production, 112 licenses have been granted to 45 national and foreign companies over last two years from which it is reasonable to expect that additional reserves will be discovered ⁶.

1.1. COAL ESTIMATES

Mozambique's estimated coal reserves are sizeable and have the potential of providing 20 percent of world's sea-borne coking coal by 2025. Production began in 2011 with Vale's Moatize mine near Tete. Rio Tinto and Beacon Hill began production in 2012. By 2020 composite estimates are around 50 million tons per year ⁷.

The delay in reaching larger production capacities is largely due to infrastructure bottlenecks. In Tete there is currently only one transport option to move the commodity to port – the Sena (Tete to Beira) rail line. In 2012, this was only able to accommodate around 3 million tons. While the Beira line is being upgraded to accommodate 6.5 million tons and aiming to reach 20 by 2017, progress has been slow.

A second option to move the goods on rail to the port of Nacala where there is a deep water port is also under development. Upgrades valued at 4 billion dollars are underway to the rail line running from Malawi to Nacala to manage up to 18mtpa (metric tons per annum) by 2015 and expand to 30 mtpa if needed.



1.2. NATURAL GAS

Mozambique's natural gas deposits are a recent discovery. However, current estimates are between 0.85-1.13 trillion cubic meters. If true, this places Mozambique's gas deposits in the top 15 of total gas reserves in world. It is unlikely however that exports will take place before 2020 as expensive infrastructure must be built (such as liquefied natural gas processing plants or "trains") to process the raw extracts. Currently, Sasol is the only company already selling gas via an 860 km pipeline to South Africa (which required around a 1.5 billion dollar investment). There are now two trains in the planning and design phase to harness the raw gas for export (with a planned capacity of 10mtpa).

⁶ Ministry of Minerals, 2013.

⁷ Hubert 2012. Merrill Lynch Research, Vale SA, 12 October 2011. "Mozambique 2012," African Economic Outlook, p.4. Chris Callaghan, Mozambique Mineral Scan, Trademark Southern Africa, 2011, p. iii.

1.3. OTHER MINERALS

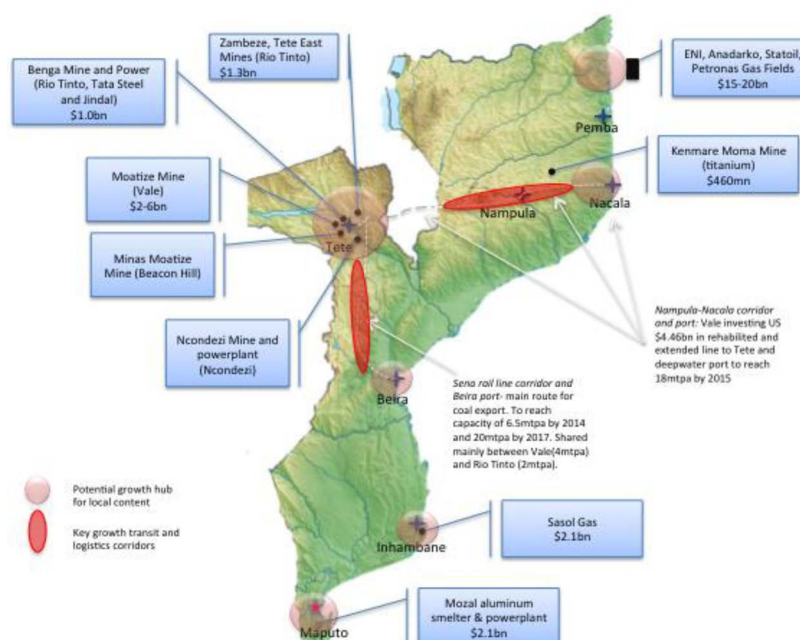
Mozambique also has potentially large deposits of other valuable minerals. Current projections estimate that there is around 100 million tons of heavy mineral sands which could provide 20 percent of global demand for titanium. Others include tantalum, limestone, gold, uranium, and iron ore. Most of these to date have been found in the north where Kenmare is already producing ilmenite at 750,000 tons annually and could grow to 1.2 million tons. Other exploratory activity is taking place in Gaza Province.

Understanding how natural resources extraction and production will affect Mozambique's economic development is important to the discussion of local content in two main ways. First, how the government responds and adjusts its behavior and structures to accommodate the future windfall profits gained from this growing sector will have serious consequences for the overall business environment in the country. In 2011, the extractive sector accounted for around 9 percent of GDP. This has the potential to grow to 15 percent by 2015⁸. The IMF estimates that the government's share of profits from the sector could contribute to about 3.5 billion dollars a year, or 18 percent of GDP, by 2025 (GDP in 2011 was 12.6 billion dollars)⁹. Megaprojects alone could reach 40-50 percent of GDP¹⁰.

How the government manages these large sums of money and invests back into the economy to improve the overall business environment will have either transformational positive effects or, if managed poorly, lackluster and disappointing results.

Secondly, and more directly related to LC, is effect this sector will have on stimulating growth in the local market for new jobs and private sector enterprise development. Forming around the areas of natural resource extraction and export, shown in the Figure below, are growth poles that can become drivers for job creation, enterprise formation, innovation and wealth creation.

FIGURE 1: POTENTIAL GROWTH CENTERS AND CORRIDORS LINKED TO MOZAMBIQUE'S NATURAL RESOURCE EXTRACTION INVESTMENTS



Source: Author

⁸ MOF, 2012. Cenário Fiscal de Médio Prazo 2013-2015.

⁹ Africa Progress Report 2013, p. 45.

¹⁰ 2012 Speed Report. Mozambique Coming Natural Resource Boom. 2012. This figures assumes the value of discoveries to be about 400 billion dollars over 4 decades; exports of 10 billion dollars each year; extraction companies take 50 percent share; Mozambique's revenues would be roughly 5 billion dollars; gas-related mega projects could then add another 20 percent to IMF projected GDP in year 2020.

Although mapping these large investments around gas and coal in Mozambique is useful in showing the large amounts of direct investment that will likely flow into the country, it is difficult to conclusively determine what the precise effects will be for local suppliers and for creating jobs. This, in part, is due to a lack of available information and data on local procurement projections for companies and also insufficient information on existing local capacity in key supply chains. Having a better idea of a disaggregated procurement schedule by goods and services from large operators and sub-contractors leading each large investment project will provide a more accurate estimate of the potential new end markets for goods and services. Likewise, being able to gauge the scope and size of existing local capacity to provide such services and goods will allow us to determine a realistic estimate of the degree of local participation and where it can be strengthened.

What is known is that natural resource based exploration and production investments do not create large numbers of direct jobs. As a comparison, manufacturing produces nearly 10 times the number of positions as extractive industry. According to the United Nations Economic Commission for Africa, African manufacturing has been shown to produce nearly 17.5 times more jobs than mining. The ratio of indirect jobs to direct jobs in the extractive industry favors indirect job creation in a ratio around 3:1 ¹¹.

Experience in Mozambique to date reinforces this trend. Sasol's investment of 1.2 billion dollars has resulted in fewer than 700 long-term jobs to date. Similarly, Vale's 1.7 billion dollar investment so far has resulted in fewer than 900 long-term jobs ¹². Using these data points, with full coal capacity the mines will only create 7,000 direct jobs and total direct and indirect job growth will be in the tens of thousands (labor market growing by estimated 300,000 annually). Given an estimated workforce size of about 10.2 million in a country of 23.4 million this would account for only around 0.01 percent of the workforce. Contributions to direct job growth from the gas sector will also likely be quite small and the indirect job growth smaller than that for coal ¹³. As a point of regional comparison, by 2008 Tanzania's large-sale mining sector had created about 8,000 direct jobs and 45,000 indirect; by 2009, large-scale mining in Ghana employed around 17,000 people directly ¹⁴.

This evidence on the effect of the extractive industry on job creation, especially in these growth centers and corridors, emphasizes the importance of linking any LC policies, laws and regulations directly into supporting the strengthening of the overall business enabling environment and focusing local content development on strengthening local supply chains in sectors that are broad-based and can sell into many end markets, not just the extractive industries. Good examples of these include agribusiness; light manufacturing for goods such as safety equipment and products; support services like catering and laundry; maintenance and repair; logistics and transport; and hospitality and tourism. Running parallel should be investments in education and technical training to build a trained workforce to takeover high-skilled direct jobs in the medium-term.



¹¹ World Investment Report 2007, p. 154. Minerals and Africa's Development: The International Study Group Report on Africa's Mineral Regimes, Economic Commission for Africa, 2011, p. 61. World Investment Report, 2007, p. 134. Mining in Tanzania: What Future Can We Expect, International Council on Minerals and Metals, 2009, p. 5.

¹² Appendix II. The Impact of Megaprojects on growth in Mozambique, IMF Country Report No. 11/350, p. 51. Minerals and Africa's Development: The International Study Group Report on Africa's Mineral Regimes, Economic Commission for Africa, 2011, p. 111.

¹³ Appendix II. The Impact of Megaprojects on growth in Mozambique, IMF Country Report No. 11/350, p. 51.

¹⁴ ISG Report, p.61.

2. DEFINITIONS AND PURPOSE OF LOCAL CONTENT

2.1. DEFINITION OF LOCAL CONTENT

Local Content (LC) does not have any one agreed upon definition. This often contributes to the confusion found in discussion around LC. As mentioned previously, LC narrowly defined refers to the percentage of a product whose added value originates domestically (within the country) while a more common definition of LC, sometimes referred to as Local Procurement (LP), is the purchasing of goods or services from a local supplier.

LC in Mozambique encounters similar definitional issues. Generally, most dialogue on LC focuses on defining LC as the purchasing of goods or services from local suppliers. What constitutes “local” is still disputed. This can simply be a designation of a firm that operates in the country or it can link back the criteria used to classify a firm as “Mozambican”. In the latter case, there are varying requirements of what constitutes a firm as “Mozambican”; no single definition exists in Mozambique (see discussion on existing policy and legal framework).

LC can also be disaggregated and defined at varying levels by ownership type (such is the case with “local” criteria with South Africa’s Broad-based Black Economic Empowerment program) or by geography (such as is done in Nigeria with Local Community Content which refers to Nigerian-owned firms located in the Niger Delta region). Local ownership as a criterion can also assume varying levels. The IFC has developed a tiered approach to local ownership whereby a Level 1 means a supplier owned by foreign capital but located in the country; Level 2 means a supplier partly owned by locals with foreign majority stake; Level 3 is a supplier partly owned by locals with local majority stake; and Level 4 is a supplier wholly owned by locals¹⁵. A similar tiered approach could be applied geographically whereby different level designations are given to firms on account of their proximity to the main source of operations.

“Local” can also be used to define the size of an enterprise to target micro or small-size enterprises within a particular catchment area or it can refer to a particular set of under-represented enterprises such as women-owned firms or, in the case of South Africa, black-owned firms.

What will be important in Mozambique moving forward will be to adopt an agreed upon definition of “local” which will then help determine how to measure LC. Experience with various definitional approaches speaks to one key theme - while the definition of local and LC is important, it should not be the central tenet of any local content initiatives. Rather, focusing on the results of local content support such as job creation, inclusive economic growth within a particular production area, and wealth creation is more important and should drive decision-making.

2.2. OBJECTIVES OF LOCAL CONTENT

In the conversation around LC in Mozambique, it is equally important to clarify and agree upon the long-term objectives of local content activity. Too often not enough attention is given early in the process in communicating clearly the reason to have local content public policies and to set the expectations of what these are meant to accomplish. It can not be overemphasized enough that any local content work must be seen as complementing and reinforcing larger business enabling environment reforms that are either under way or must be undertaken.

The objective of local content is to use a new source of sector growth (such as the investments around Mozambique’s extractive industry) to improve productivity and competition in local markets. This is done by coordinating and leveraging resources to address key market failures that are preventing local firms from accessing and benefitting from new markets (in this case the consumption of goods and services from the extractive companies).

¹⁵ IFC, Local Procurement Guide.

While there are many constraints and obstacles to doing business in Mozambique, a few market failures in particular stand out when discussing how to help local firms sell into the new end markets created by the extractive industry. Any LC action must build off these market failures in designing its activities.

First, the market structure that is developing in Mozambique as the natural resource extractive sector comes online is creating high barriers to entry. There are few buyers (the large extractive companies) and not enough sellers (local businesses). Making matters worse, the local businesses that do exist are most often not producing the quality or lack the capacity to fulfill the consumption demands of the large international companies. This results in goods and services being imported almost entirely save for a few small contracts with local firms. This is made worse by the timing issue. Although full-scale production of coal and gas will not come online for several years, investments in the enabling infrastructure are already underway and ahead of the capacity of the local private sector to respond. The timing of new investments is out of sync with the time it will take for the local private sector, even operating in the best of environments to develop the capacity needed to satisfy the demand.

Secondly, there is an overriding information asymmetry in the market, both between government and the private sector and within the private sector. In the former, the government has not been effective in facilitating the communication and dissemination of market conditioning information such as laws, policies, regulations, industry standards, and procurement notices. In the latter, the large international private sector extractive firms are not sharing procurement plans and projections of goods and services required, employment requirements and needs, purchasing standards and grades, and procurement notices. Both have resulted in local firms being unable to compete fairly due to not having a full set of information from which to adjust their business behavior.

Third, the market in Mozambique is not as competitive as it needs to be in order to facilitate equal access into new markets for businesses. Mozambique ranks 146 out of 185 on the Doing Business ranking system in 2013¹⁶. Starting a business, permit processes, access to finance and poor access to infrastructure drive up the cost of doing business and make it difficult for local businesses to compete fairly. A 2007 Enterprise Survey of 479 small, medium and large enterprises found that around 23 percent cited access to finance as the largest constraint to doing business¹⁷. In close second were practices by the informal sector that undercut those firms adhering to laws and tax codes. KPMG's Business Confidence Index 2011 Report for Mozambique also pointed to the issue of informal practices and corruption as extreme hindrances on the growth of businesses. Both corruption and crime were amongst two of the three highest deterrents expressed by survey participants¹⁸.



¹⁶ Doing Business Mozambique, 2013.

¹⁷ Enterprisesurveys.org. Mozambique Country Profile 2007.

¹⁸ KPMG, Business Confidence Index Mozambique 2011.

3. MAPPING CURRENT LEGAL FRAMEWORK AND INITIATIVES FOR LOCAL CONTENT IN MOZAMBIQUE

The existing legal framework in Mozambique that relate to LC or LC issues is decentralized to the sector level and does not address LC in a coherent manner. Instead, LC related topics are found throughout laws and regulations and are not directly identified explicitly.

3.1. EXISTING POLICY FRAMEWORK RELEVANT TO LOCAL CONTENT IN MOZAMBIQUE

While there is no overriding legal and policy framework that guides local content requirements and programs in Mozambique there are important existing policy and legal structures already in place that support local content development if not outwardly requiring local sourcing of products and labor.

POLICY AND STRATEGY

While LC is not an explicit focal area in the development plans and strategies for Mozambique, broader business enabling environment reform and domestic private sector growth are priorities. These agenda items must not be overlooked as they form the broader development context in which any local content initiatives must be structured and supported:

- PARPA, the Poverty Reduction Plan (2011-2014) outlines the government’s vision for economic development and poverty reduction. The Plan explicitly indicates pursuing a policy that promotes “broad-based” growth; diversifying the economy, creating jobs and linkages between foreign investment and the local economy;
- The 5-year Plan, 2010-2014, speaks of crowding-in additional foreign direct investment as a means to stimulate local economic growth. Presumably, the plan is referring to the large sums of FDI associated with the mining, oil and gas investments. The envisioned outcome is greater local enterprise growth and supply chain development in the areas of infrastructure, agribusiness, fisheries, forestry, tourism, mining and export-oriented manufacturing.

PETROLEUM AND MINING

The older regime of petroleum and mining laws, now under revision, does not have any significant local content requirements. However, there are some clauses found in this regime that do relate to local content:

- Petroleum Law 2001 – Article 9 Section 2 states that Mozambicans have preferential right in the granting of petroleum blocks. Article 17 section (g) states that companies must “give preference to Mozambican products and services whenever they are competitive in terms of price and comparable in terms of quality and supply”;
- Draft Petroleum Law 2013 – Article 20 (4) calls for the same preference for Mozambican firms with a 10 percent margin of preference assuming equal quality, time in delivery and quantity availability;
- Draft Oil and Gas Tax Law 2013 provides five year customs and VAT tax exemption on imports of goods related to mining exploration and exploitation only when local goods are not available [article 41 (1-3)];
- Mining Law of 2002 does not make any specific mentions of local content;
- Draft Mining Law 2013 requires a percentage of revenues generated by mining will be placed to local community development as channeled through the State budget (article 51). All companies wishing to provide services to foreign mining companies must associate with a Mozambican firm [article 53 (2)]. Preference must be given to local firms when the quality of materials, time of delivery and quantity is available and the price, including taxes, does not exceed additional 10 percent than the imported good [article 53(4)];

- Draft Mining Tax Law provides five year customs and VAT tax exemption on imports of goods related to mining exploration and exploitation only when local goods are not available [article 60 (1-3)]. This is meant to act as an incentive to source goods locally first if available;
- Individual mining contracts must include (i) a local employment and staff training strategy; (ii) ore value-adding incentives; and (iii) a corporate responsibility plan.

OTHER RELATED LAWS

Traces of LC are also found in the recent PPP legislation. Of particular importance are the definitions and the content in the Procurement Law and Law on Investment and how they influence the definition of LC in any future policy:

- PPP, Large-scale Projects (LSP) and Business Concession (BC) Law 2011 and PPP Regulations 2012- Article 34 of the PPP Law states that the PPP investment must benefit the Mozambican economy and create jobs for Mozambicans should offer opportunities for technology transfer to locals, and help build local SMEs. Article 33 makes provisions for PPP, LSP and BC projects to promote the inclusion of Mozambican investors by encouraging between 5-20 percent of investment shares to be offered on the local stock market;
- Law on Investment, Regulation of the Investment Law and Code of Fiscal Benefits- While these do not apply to the petroleum and mining sector, they are relevant to supporting companies such as construction, hospitality, catering, equipment supply that will likely grow as a result of the extractive sector and should be participating in local content work.

Related to the definition of “local,” or “Mozambican,” Article 1(r) of the Investment Law defines a Mozambican firm as “any company or institution formed and registered under Mozambican laws, with headquarters in the Republic of Mozambique, and in which the respective share capital belongs to at least 50 percent to Mozambican citizens, companies or institutions, whether public or private.”

Article 18 of the Code of Fiscal Benefits permits tax benefits for the cost of investment in professional training of Mozambican employees up to a maximum amount equal to 5 percent of taxable income. Training spent in the utilization of equipment considered to be new technology can equal up to 10 percent of taxable income.

There are additional fiscal benefits afforded to key sectors such as rural commerce and industry (article 24), manufacturing and assembly (article 25), agriculture and fishery (article 27), and tourism (article 30) and in special development areas (i.e. Zambezi River Valley including all Tete, article 40). While these are not directly related to local content they are fiscal incentives that will help emerging SME’s increase their profits and help growth:

- Procurement Regulations 2010 contain nationality criteria to favor local firms. They require tenders to either restrict participation based on nationality or provide a preferential margin to national bidders or nationally produced goods (Article 26 (2-4)). The margins are 10 percent of the pre-tax contract value for public works and 15 percent of the pre-tax contract value for nationally produced goods. These criteria must be specified at the time of the tender. For the bidder to benefit from the margin of preference they must demonstrate that at least 25 percent of the finished item at factory door contains national inputs. “National” is considered either a person of Mozambican nationality or a company with at least 50 percent of their social capital held by Mozambicans;
- Decree 63/2011-Regulation for the employment of citizens of foreign nationality in the Petroleum and Mining sectors requires that investors make their best effort to hire Mozambicans where possible throughout their operations and all foreign workers can be hired through the quota system set by the Government.

3.2. TRADE-RELATED LEGAL ENABLING ENVIRONMENT RELEVANT TO LOCAL CONTENT POLICY

Existing trade laws, agreements, protocols and bi-lateral agreements are also important influences on local content. They often restrict the protection of certain goods and labor requirements. Given Mozambique is a member of WTO and a signatory to the Southern Africa Development Community (SADC) trade protocol of 2012, it must be careful to craft any local content policies without violating these agreements:

- WTO Agreement on Trade-Related Investment Measures (TRIMS) does not allow local content requirements to protect domestic industry. It states that “measures requiring the purchase or use by an enterprise of domestic products, whether specified in terms of particular products, in terms of volume or value of products, or in terms of a proportion of volume or value of its local production (violation of General Agreement on Trade and Tariffs Article III (4).” However, developing countries are permitted certain transitional periods and exceptions by virtue of the economic development needs;
- SADC Trade Protocol of 2012 Article 14 ensures equal market access by limiting the right of States’ to pass protectionist measures on service suppliers by quantity or value. However this is dependent on being “in line with individual countries’ level of development.” Article 15 allows for “national treatment” as long as it is set out in countries’ lists of commitments. Article 16 calls for the liberalization within 3 years of six priority service sectors including communication, construction, energy-related, financial, tourism and transport sectors ¹⁹;
- General Agreement on Trade in Services (GATS 1995) makes some provisions for each country to commit to particular goals with market-access commitment and market-access limitation in the service industry. Mozambique has only committed to financial services to allow foreign banks or financial institutions to operate in Mozambique as long as they abide by the rules and regulations governing investment and operations of such institutions.

3.3. WEAKNESSES IN EXISTING LEGAL AND POLICY FRAMEWORK

Reviewing the existing legal and policy framework that relates to LC we are able to see that while LC is not an explicit focus in any place it is also not absent. Instead, where LC requirements already exist they are decentralized to the mandate of each sector. Discussions with the government and local business also uncovered important weaknesses affecting the existing LC-related content in the existing laws and policies. These can be summarized into three main categories: (i) conflicting definitions and requirements that create confusion and sometimes legally conflicting guidance; (ii) insufficient dissemination and education on existing laws with key stakeholders, both public and private; and (iii) inconsistent and weak enforcement. This has resulted in confusion in the marketplace as to what rules firms are expected to follow and what the penalties are for non-compliance. Small and medium-sized firms are largely unaware of these existing requirements and instead are frustrated with government for what they perceive as government not doing anything to protect and help local suppliers. For example, many discussions with SME firm owners in both Maputo and Tete revealed that few were aware of the 10-15 percent price margin preference already in place for local firm contracting in the Procurement Law. Finally, the existing regulatory weaknesses also call into question the ability of the government to enforce any new legislation and regulation that deals directly with LC.

¹⁹ SADC. Protocol on Trade in Services. 2012.

3.4. EXPERIENCE WITH LOCAL CONTENT INITIATIVES TO DATE IN MOZAMBIQUE

Complementing this framework, Mozambique has recent relevant experience with some local content and business linkages initiatives that underscore the challenges faced in establishing these. Assessments on the success and failures of these local content and business linkages in Mozambique have already been completed, specifically with the MozLink programs.

These assessments have uncovered several important weaknesses in the local market and with local enterprises that are thwarting greater success with building local supply chains²⁰. These include:

- Varying levels of corporate commitment that, in part, determined the success of the program. Identifying and working collaboratively with good private sector companies with genuine interest in investing in the local economy is a critical factor for success for local content implementation;
- Mixed understanding from local SMEs on what local content outreach and support programs can offer and do to help their business resulted in mismatches between expectations and outcomes. For Mozambique moving forward it will be important to provide a clear definition and explanation of the purpose, objective, definition and process of local content policy initiatives and to use these to educate participating SMEs so expectations are mitigated and matched correctly to the realities of the program process. The current unclear policy framework and uncoordinated treatment of local content does not facilitate the success of any local content initiatives and associated business linkage activities;
- Understanding the constraints in the local financial markets that must be dismantled to facilitate local enterprise growth requires careful analysis and attention. While business development services are a necessary component to local content support work they must be pursued alongside access to finance strengthening. Mobilizing sources of new capital and investment for many growing local businesses is a fundamental enabler for a successful local content program and policy initiative;
- Local content policy must stress the objective to move local enterprises to be internationally competitive in both price and quality. Successful business growth reached best results when businesses improved their goods and services to a level where their potential market includes locally operational extractive companies but extends beyond borders;
- Competitive and transparent procurements and tendering processes for selecting local business to participate and for all procured services along any value chain must be followed in order to avoid market distortions.

Mozlink's results showed some promise for business linkage programs that support local content development. Data for the three year Mozlink II program (supported by both Mozal and the IFC) shows that the program was able to leverage around 15 million dollars in contract value and 53 million dollars in additional sales revenues for local SMEs from an investment budget of around 700 thousand dollars²¹. A total of 336 formal jobs were created as well. These results are in line with other regional local content business linkage support projects.

Similar programs have been undertaken in Nigeria, Chad, Azerbaijan and Guinea. Programs in Nigeria and Azerbaijan included an access to finance component as well. Data availability makes it difficult to draw convincing conclusions on the value-for-money of these local supplier business linkages programs and the long-term sustainability of the contracts won and jobs created. The figures on the number of contracts signed and sales revenue resulting are significant when compared to a scenario with no intervention. Yet, these amounts are still miniscule when placed in the larger context of the overall expenditures (annually in the 100's of millions) that these large extractive companies oversee.

In Mozambique, other companies such as Vale and Rio Tinto have already spent several billion dollars in infrastructure and services that have impacted the local economy. However, there has been no systematic collection of impact information about the number of local contracts issues, the value added from local industry and labor nor the number of local jobs created.

²⁰ USAID, Mozambique Business Linkages Review: An Overview of Key Experiences, Issues and Lessons. USAID SPEED. October 2012.

²¹ Ernst and Young, Evaluation of Mozlink II, 2012.

4. LESSONS FROM OTHER LOCAL CONTENT POLICY EXPERIENCES

A brief look at the research and past experiences with local content requirements found in policies, laws, and regulations suggests that the evidence is mixed on the ultimate success of these requirements in rendering local enterprises market competitive in supplying goods and services into the extractive industry-related supply chains. What the literature does agree on is that any local content initiatives must be approached cautiously so as to not further distort the market by creating failures that then become perpetuated and embedded in public policy.

For example, local content requirements can have the same economic effect as a tariff and this can result in lower prices and damage business revenues²². Local content requirements that require companies to purchase target amounts of goods from local suppliers regardless of whether the local goods and services are competitive in price and quality increase the cost to the purchasing firm. In turn, these may demand lower prices from local suppliers to balance out the increased cost they have incurred. The result of this can be a reduction in business revenues to the local company.

A comparison of other countries' experiences with local content laws, policies and regulations is useful in comparing and contrasting the results of various approaches. There is an unfortunate dearth of reliable data that quantifies the effect that local content policies have had on stimulating local business growth and creating jobs. The comparison also underscores that there is no one model for local content that should be replicated exactly in Mozambique. Instead, understanding the successes and failures and drawing forth the lessons learned will help the Government of Mozambique structure an informed and customized approach that addresses the specific market conditions in the country. Table 2 provides an overview of the key features of each country's legal/policy framework.

4.1. NIGERIA

Following years of having local content requirements dispersed throughout various legal instruments, in 2010 Nigeria approved its Nigeria Oil and Gas Industry Content Development Act. The Act is intended to stimulate the development of Nigerian firm participation in the oil and gas industry and improve the coordination, monitoring and implementation of Nigerian content support. It creates the Nigerian Content Development and Monitoring Board (NCDMB) with the responsibility to oversee the implementation of the Act and a Nigerian Content Development Fund funded by the sum of one percent of every contract awarded to an operator, contractor or sub-contractor. The NCDMB includes representatives from the Nigerian National Petroleum Company, the Agency in charge of technical regulation, Ministry of Petroleum Resources, the Petroleum Association of Nigeria, Nigerian Content Consultative Forum, Council of Registered Engineers of Nigeria, and the National Insurance Commission. This Fund is intended to help support Nigerian content development through training, business support services and other programs. It also includes a detailed Schedule that prescribes the amounts and percentages to be awarded for each broad category of good and service to a Nigerian firm. In the Nigerian Act, "Nigerian content" is defined by the value added or created in the Nigerian economy by Nigerians. It does not go into details about firm ownership nor provide a clear definition of what is considered "Nigerian".

The Nigerian Act is also rigorous in the bidding and procurement requirements it asks of all contractors, operators and sub-contractors. It requires a Nigerian Content Procurement Plan, an Employment Plan for a 4-year period, and frequent review and evaluation of both by the Board. The Board also is required to review all bidding document at the pre-qualification stage and the award stage to review them to ensure they meet the Nigerian content requirements and are compliant.

²² Mussa 1984.

The Nigerian experience provides some important lessons that should be considered in Mozambique. First, the Nigerian approach does a good job at requiring the disclosure of information on local (“Nigerian”) procurement and employment for contracts above 1 million dollars. It also employs the value-added definition for local content rather than focusing on ownership explicitly. Finally, the creation of a specific Fund that targets local business development and training for the industry is a step forward.

Yet, what is thorough on paper has not correlated into results. There is not consistent and equally enforced implementation of the Act and this has created confusion within the sector. The prescriptions and targets for each good and sector in many cases are not realistic and instead distort the market further by mandating quotas that uncompetitive firms demand they deserve rather than earn fairly. This has ingrained a certain level of uncompetitive behavior amongst local firms that see the Act as setting aside certain amounts of contracts for them regardless of their ability to provide quality and competitive goods and services. Likewise, the increased levels of scrutiny from the NCDMB associated with larger contracts has slowed down operations and pushed many operators to pursue contracts that have large amounts of local content into smaller sizes to avoid constant scrutiny. For example, in order to avoid the extra burden of having the NCDMB reviewing all contracts, large oil companies are dividing up local contracts into sizes that fall below the NCDMB threshold for review. This has the effect of limiting local firms from obtaining larger contracts and building business systems that are required to win and manage larger service engagements.

While the value-added approach to defining Nigerian content is included in the law poor data and a difficulty in calculating the value added of a good or service in Nigeria has resulted in a de facto measurement of Nigerian content by firm ownership. This has presented some issues of moral hazard whereby the true ownership of firms seeking contracts is unclear and often times third-party “pass through” businesses are created to get contracts without having real links into the local market or local employment.

Poor data collection and availability makes it difficult to verify the extent to which the Nigerian Act has resulted in new jobs in local markets and increased firm revenues linked to the oil and gas sector. It has likely resulted to a degree in more local contracting and some jobs. However, whether this is attributable to the prescriptive and protectionist measures or rather better information that is required to be disclosed is uncertain.

4.2. GHANA

Ghana has a well-established history of gold mining but oil production only came on line as recently as 2010. Ghana acted early to develop a policy framework to encourage local content in the oil and gas industry and to take a long-term vision on how to use this new growth sector to stimulate local private sector development. Ghana began by developing a LC and LP in Petroleum Activities Policy Framework in 2010. This Framework defines “local” as “the level of use of Ghanaian local expertise, goods and services, people, businesses and financing in oil and gas activities”.

The Policy Framework sets out the obstacles in the sector, the vision, objective and goal of local content and how local content fits into the larger economic development agenda for the country. It requires an Annual Local Content Plan and an Annual Recruitment and Training Program and creates the National Local Content Committee to oversee the implementation of the Policy Framework. Finally, like Nigeria, it creates the Oil and Gas Business Development and Local Content Fund to support the capacity development of local suppliers in the oil and gas industry.

Although still recent in terms of implementation a key positive lesson that can be taken away from the Ghanaian experience is that of process. Rather than starting immediately with a law and regulation, Ghana began the process of local content with a Policy Framework that was used to define the broad approach, define goals and vision, and build consensus and support across both public and private sectors. Ghana is said to be developing a new Regulations for local content in the petroleum sector but to date nothing has been approved by Parliament.

4.3. ANGOLA

Angola's local content legal framework is spread across over 9 separate pieces of legislation²³. Of particular distinction in Angola is the requirement of full or partial government ownership of key enterprises in the oil and gas sector (i.e. Sonangol). The legal framework for local content in Angola is not clear and is diffused in several separate legislative pieces making it difficult to understand. There is a strict requirement to make sure that at least 70 percent of employees are Angolan workers. This has not, however, resulted in the transfer of skills and training of local Angolans. Nor has Angola's wealth generated from oil exports stimulated private sector growth. Angola ranks 172 out of 185 in Doing Business²⁴.

Angola's experience with local content is limited in what it offers to Mozambique as an example. No reliable data exists to gauge the success of the activities supported by the Fund for Training and Development of Human Resources nor on the levels of enforcement of existing local content requirements that exist in Angola to date.

4.4. SOUTH AFRICA

South Africa's local content experience is unique given its history with apartheid. South Africa established the Black Economic Empowerment (BEE and later Broad-based Black Economic Empowerment, BBEE) aiming to redress much of the inequality created during apartheid. The program prescribes very specific measures and targets by sector that includes procurement preferences, employment preferences, and management and ownership. Since its inception in 2001, the BEE program has expanded to become the Broad-based Black Economic Empowerment (BBEE) program and is highly decentralized and sector-specific. Recently the Government passed Guidelines on how to calculate local content using a specific mathematical equation. This followed from the Local Procurement Accord in 2011 that was a jointly created public and private commitment to improving local procurement in core sectors of the economy.

Given the complexity of South Africa's BEE/BBEE system, which can be classified as their equivalent to local content, it is difficult to draw broad ranging conclusions. A more fair analysis would look at the effect of the BBEE requirements by sector. For example, in 2010 the Government passed an Amendment to the BBEE Charter for the Mining and Minerals Industry²⁵. The amendment calls for highly specific targets for local enterprise participation, employment, human resource development and training and community development.

While South Africa's model is quite thorough, it has resulted in some negative consequences. First, the BBEE codes are highly complex and difficult to understand. This has raised the cost of doing business in South Africa significantly and, in some cases, driven business away from investing further. Another criticism of the BBEE codes is that they have not resulted in sustainable private sector development and enterprise growth. In many senses this can be attributed to the approach of mandating firm purchasing behavior rather than finding a more balanced mix of regulation, support to improving the business enabling environment, and incentives to catalyze local procurement without sacrificing quality and cost.

²³ Oil Activities Law (Law 10/04); Oil Taxation Law (Law 13/04); Oil Customs Law (Law 11/04); Law for the Promotion of Business for Local Private Companies (Law 14/03); Mandatory Hiring and Training of Angolan Citizens (Decree 20/82 and Law 17/09); Fund for Training and Development of Human Resources (Decree 14/10); Contracting Services from Local Companies in the Oil Industry (Decree 127/03 and 48/06); Exchange Regime for Petroleum Sector (Law 02/12); and Private Investment Law (Law 20/11).

²⁴ Doing Business 2013.

²⁵ Amendment to Broad-based Black Economic Empowerment Charter for the South African Mining and Minerals Industry, September 2010.

TABLE 2: COMPARING LOCAL CONTENT LAWS, POLICIES AND REGULATIONS ACROSS COUNTRIES

	Nigeria	Ghana	Angola	South Africa
Legal Framework	Nigeria Oil and Gas Industry Content Development Act, 2010	Local Content and Local Participation in Petroleum Activity Policy Framework, 2010	Spread throughout nine difference pieces of legislation	Broad-based black economic empowerment (B-BEE) Charters and Codes (by sector)
Local Content definition	Value added or created in the Nigerian economy by Nigerians; Nigerian ownership defined by 51% of firm equity owned by Nigerian national	Level of use of Ghanaian local expertise, goods and services, people, businesses and financing in oil and gas activities	Value-added of goods and services in country; Angolan ownership defined by 51% of firm equity owned by Angolan national	Multiple criteria including value-added of goods and services, ownership and location
Key Requirements	Nigerian Content Procurement Plan Employment Plan	Local Content Plan Annual Recruitment and Training Program Plan	Angolan partnership for any firm	Disaggregated by sector and between employment, services and goods
Leading Institution	Nigerian Content Development and Monitoring Board	Local Content Committee	Ministry of Petroleum	By sector ministry
Local content targets specified	Highly specific requirements by sector and goods	Sets long-term targets but does not prescribe by sector	At least 70 percent Angolan employees; general listing of key sectors without specific targets	Sets specific strict targets by sector
Distinguishing Features	Stringent and detailed requirements per sector and good; introduces many new procurement approvals and checks; establishes Nigerian Content Development Fund.	Process of dealing with local content began with a policy, rather than law, and useful in defining vision, strategy, goals and approach for implementation.	Unclear local content objective and policy and implementation responsibility	Complex and complicated system of requirements by sector; Social Development Fund

4.5. TRINIDAD AND TOBAGO

Trinidad and Tobago’s approach to local content is centered on their Energy Sector Local Content and Local Participation Policy Framework passed in 2004. This Policy Framework defines LC in terms of ownership, control and financing the citizens of Trinidad and Tobago ²⁶. The Policy Framework does a thorough job at defining LC, stating how each key institution and the private sector will cooperate to achieve the vision, and how the Government intends to implement its LC activities. The Framework also calls for the establishment of a Local Content Committee to drive the process forward.

The Trinidad and Tobago model for increasing local content has relied heavily on the use of joint ventures to facilitate skill and technology transfer. One successful example of the use of joint ventures to build local capacity is that of the BP’s local Trinidad and Tobago subsidiary BPTT. With a local partner, BP decided to build its Cannonball platform in Southern Trinidad with a 10 million dollar price premium (rather than importing). However, this project was used as a capacity building endeavor to transfer skills and knowledge to BP’s local partner firm. Five years later, BP engaged the same local partner to build two more gas platforms at a cost savings of around 11 million dollars.

Another positive lesson to draw from Trinidad and Tobago’s local content activity is the creation of the Local Content Chamber. This independent institution is funded by the large international oil companies and focuses on providing local suppliers training and technical assistance to help them be more competitive as service providers to these large firms.

²⁶ Energy Sector Local Content and Local Participation Policy Framework 2004, Government of Trinidad and Tobago.

4.6. NORWAY

Norway is often cited as a case study of how local content policies can successfully leverage a natural resource to build a stronger domestic private sector and capable supply chain. Although the international free trade rules and global competitive landscape (i.e. China, India and Brazil) did not command the same market presence at the time when Norway developed its policies as they do now as suppliers, there is much to be learned from Norway. Through its state-owned oil company, Statoil, Norway prioritized investing in research and development, partnerships with research institutions, and skill transfer as a strategy to diversify its economy to participate in the oil and gas industry. Norway provided tax incentives for firms that invested in research and development with local academic institutions and also provided incentives during the procurement process whereby bidding firms that brought Norwegian firms onto their bid were awarded more points than those that did not. Norway also took a long-term perspective by using profits from the oil and gas industry to leverage its existing manufacturing base to diversify and innovate for the oil and gas industry and service sectors.

There are many other examples of governments that have either used local content policies and laws to stimulate local economic development broadly or in specific sectors (like Brazil) and others that are in the process of forming their frameworks (Sierra Leone recently passed a Local Content Policy in 2012). Each have their own lessons learned and experiences that are useful for Mozambique. Those discussed here, however, along with Mozambique's own experience and the current political-economy environment are sufficient to put forward three main options for local content moving forward.

5. OPTIONS OF LOCAL CONTENT IN MOZAMBIQUE

Based on a mapping of the existing legal framework, the market failures and challenges to economic growth tied to the natural resource sector, and lessons from other countries' experience with local content, Mozambique has three main options to address the issue of local content. These options range from no action at all to developing a specific local content law and regulations or starting with a Local Content Policy Framework. Table 3 below summarizes the benefits, costs, lessons learned from other countries, and potential consequences of each for Mozambique. Regardless of what is selected and determined to be the best fit for Mozambique any action (or inaction) should be accompanied by a renewed commitment and prioritization to improve the business enabling environment and maximize the effectiveness of ongoing business reform and SME development programs.

5.1. OPTION 1

NO GOVERNMENT ACTION

The Government can decide not to take any specific action on local content and instead allow the existing mechanisms in place guide local content activity. This would mean a greater enforcement of existing clauses that help stimulate local SME development like the 10-15 percent price margin preference already found in the Procurement Law. It also would mean that local content initiatives will move forward in a highly decentralized manner with various Ministries leading their own efforts and individual mining companies structuring their own local content and local procurement programs without any guidance from Government.

The benefit of this approach is that it does not introduce any additional bureaucratic procedures and institutions that complicate doing business. Likewise, it does not insert any requirements that impose protectionist requirements on international companies doing business in Mozambique. The risk is that the Government fails to take advantage of the new investments in the extractive industry to leverage local economic development, improve productivity and competition. It may also fail to address the political-economy reality that many Mozambicans living in the areas where the extractive activity is occurring are looking towards Government to provide a signal that exploiting national resources will lead to

inclusive economic growth. Lessons from other countries also point to the trend that no government intervention usually results in lost opportunity for local economic development as market forces fail to facilitate growth naturally and private companies don't often take it upon themselves to address market failures and build strong local supply chains.

5.2. OPTION 2

PASS NEW LOCAL CONTENT LAW AND REGULATIONS OR LOCAL CONTENT-SPECIFIC REGULATIONS TIED TO THE FORTHCOMING AMENDED MINING AND OIL AND GAS LAWS

The Government's second option is to address local content through laws and regulations immediately. This would either have to be done by drafting and passing a new and separate Local Content Act (and accompanying Regulations) or passing new regulations tied to the amended mining and oil and gas laws that will likely be approved in the coming year. This path confers some important benefits. First, laws and regulations carry the full force of the law and are enforceable by courts. This would allow the Government to set targets and requirements for companies and hold them accountable for reaching these targets. Secondly, a well-crafted law will be clear and should be equally applied to all and thus, in theory, be clear and transparent. It would also satisfy an immediate demand from those who want to see immediate government action.

The costs of this option for Mozambique right now are much greater. A separate Local Content Law and Regulation could improperly prescribe targets and requirements for local content without reliable information available to inform what targets are realistic and proper. As a result, the Law could require local content targets that are unattainable and would thereby cause confusion and unfair expectation within the private sector amongst SMEs and large contractors. Introducing another law requires proper and fair enforcement. Should this not be done the law would grant greater discretionary powers to a government entity and be susceptible to abuse. Based on current experience of poor communication, dissemination and enforcement of existing laws that have elements of local content support already in them it is also likely that, without a rapid increase in government capacity, this new law would suffer a similar fate in the short-term.

Finally, another serious consequence of passing a local content law and regulation prematurely would be to drive out foreign investment in the country by driving the cost of doing business up significantly through local content requirements. While some local content requirements are appropriate where there is a base of capacity locally to fulfill these, right now in Mozambique the capacity does not exist and therefore specific local content requirements (i.e. percentages by sector) are premature.

5.3. OPTION 3

DEVELOP A LOCAL CONTENT POLICY FRAMEWORK

Mozambique's third option is to develop a local content policy framework as a starting point for addressing the issues around local content. A policy framework would provide the opportunity to take a long-term perspective for the role of local content in Mozambique, define local content, set the vision, objectives and targets, and explain how the Government will pursue a coordinated approach in implementing local content.

Given the current unclear and uncoordinated nature of the dialogue around local content in Mozambique at present, the process of developing a policy framework would help the government engage with key stakeholders including the private sector and civil society on shaping the local content approach in the short, medium and long-terms. This would have the benefit of building consensus and a common understanding of local content so that expectations can be aligned with realistic outcomes. A Policy Framework would also send a strong market signal to the private sector, specifically the large international extractive companies, that engaging with the local private sector and building local content into operations is central to doing business in Mozambique.

There are also potential costs associated with developing a Policy Framework. First, the policy process can take time, and without leadership and commitment, it can result in a lengthy and frustrating process that fails to add value to improving the business enabling environment. Secondly, there must be capacity within the government to implement the contents of the Policy once approved. The capacity weaknesses that could limit the enforcement of a local content law or regulation might also reduce the effectiveness of a policy. Third, policies do not carry the same weight as laws or regulations. This could mean that some private extractive firms may not take the policy seriously and not be active in developing local content initiatives. As a result, there may be some instances where opportunity is lost to leverage large extractive companies' investments for local content development. Finally, developing a Policy Framework may be the first step in a process for local content work that might require follow up legislation or regulation. This would require a longer time in building the complete legal framework for local content than bypassing policy and moving straight to law and regulation.

Table 3: Local Content policy options

Option 1	
Benefits	Does not introduce any market-limiting activities into the economy. Avoids creating additional bureaucracy that could disrupt the investment climate if not structured properly and enforced fully.
Costs	Fails to address the market failures that are anticipated to worsen without government intervention. Does not result in more efficient allocation of resources and opportunities associated with the growth in the extractive industry. Does not respond to citizen demand and expectations and can lead to social unrest which has a cost to the economy in productivity, revenue, and the investment climate.
Lessons learned from other countries	A lack of government leadership in encouraging domestic private sector growth linked to the extractive sector resulted in capital flight, limited technical and skill transfer and isolated economic growth in Nigeria prior to recent legislation.
Potential Consequences for Mozambique	Inaction does not respond to widespread public outcry to leverage new FDI associated with the extractive industries to strengthen the local economy and stimulate enterprise growth. Inaction also relies solely on the extractive industry companies being proactive in local market development and using their market presence to strengthen the business enabling environment.
Option 2	
Benefits	Clear and enforceable legal instrument that is equally applied to all participants. Strongly responds to citizen expectations.
Costs	Limits free market accessibility by imposing restrictions, quotas and/or regulations. Can drive costs up by prescribing specific quotas, percentages and requirements for local content goods and services which are passed on from consumer to supplier. Negatively affects business enabling environment for large international firms mobilizing large sources of FDI for Mozambique. Requires immediate resource allocation to ensure proper enforcement.
Lessons learned from other countries	The passage of the Nigeria Local Content Act is said to have resulted in immediate creation of local firms. However, there are no reliable statistics and data that can substantiate these claims. The Nigeria case study does show that there is very inconsistent enforcement and measurement of the strict local content requirements resulting in confusion in the market, frustration amongst participants, and poor adherence in many key sectors from international companies.
Potential Consequences for Mozambique	Legislated local content requirements raise local expectations that cannot be met from local SMEs (cost, quality, capacity) and large buyers (time, cost). This creates wider discontent in local communities and the country. Creates uncompetitive market conditions by allocating specified amounts to local firms. Potential conflicts may arise with multi-lateral, regional and bi-lateral trade agreements. Ideas and requirements are legislated before being thoroughly thought out and understood as to if they are best placed and effective. Difficult to administer equally and enforce. Requires significant capacity support and technical assistance.
Option 3	
Benefits	Send strong and clear market signal to public and private sectors on government priority and roadmap for action. Opportunity to develop comprehensive approach and work out objectives, definitions, strategy, principles, and institutional arrangements before codified into law or regulation. Platform to build consensus between public and private sector and civil society. Does not impede on market openness.
Costs	Does not carry the same legal enforceability as law or regulation.
Lessons learned from other countries	Starting with a policy framework has allowed countries to work through key issues related to local content prior to legislating. It has also succeeded in pushing extractive firms to improve their local content initiatives. There is good evidence of this in Ghana and Trinidad and Tobago.
Potential Consequences for Mozambique	While a policy framework is a good step towards addressing Mozambique's local content approach, it will likely require follow-up legislation that carries greater legal force. This may require a longer overall time period between initial decision and the establishment of the final legal framework.

6. RECOMMENDATIONS

Taking into account the current political economy in Mozambique and the pressure to have action on local content and also considering the overriding agreement on definition, vision, of local content, the Government of Mozambique should consider developing a Local Content Policy Framework. This option would facilitate working through the fundamentals of local content and allow the Government to build a unified and coordinated approach rather than one that is ad hoc and confusing to the private sector. This approach will also enable participation from the private sector and civil society in crafting this Policy and thereby use it as a platform to build a common understanding. Positive lessons about a strong consultative process can be learned from South Africa's Local Procurement Accord process.

The following recommendations should be considered in developing this Policy Framework:

- The Local Content Policy Framework should be used to clarify the definition, vision, objective and strategy for local content in Mozambique. It must be an inclusive process that brings in the private sector and civil society. The Policy Framework should clearly set out the roles and responsibilities of government and the private sector in reaching the goals, the key institutional arrangements that will facilitate success and how local content links into the larger business environment reform process already underway in Mozambique;
- The Government of Mozambique must clearly determine its objective and strategy for the fiscal management of the revenues it will receive from the extractive sector. These resources should be transparently managed and invested to support the broader economic development agenda by building infrastructure and strengthening human capital through health and education. Having a clear strategy and process for doing so will enable any local content activities to link back into the broader economic development agenda that will be fueled by this new source of capital for the state;
- Mozambique should focus the design of local content on outcomes rather than requirements. This is particularly important when it comes to agreeing on the definition of local content. For example, too often governments get side-tracked by agreeing on a definition of “local” which often relies on a specific numeration of national ownership in a firm. Experience in places like Nigeria have underscored the difficulties of ensuring that local firm ownership results in inclusive economic growth locally or creates more formal jobs than foreign ownership. Instead, Mozambique's Local Content Policy Framework should emphasize job creation across all levels, from unskilled to highly skilled, and enterprise development. The Policy should then describe how the government and private sector in the extractive industry must collaborate to reach the development objectives;
- The Government should consider an incentive-based approach for local content development rather than a regulation-heavy approach. A Policy that rewards private companies for investing in local supply chain development, local enterprise strengthening, and local market deepening may results in quicker and more effective success than a Policy based on requirements and penalties. These rewards can be integrated into procurement processes where firms demonstrating greater local content and local supplier linkages receive higher points than those that do not. Other countries, such as Norway, have granted fiscal incentives such as tax benefits for expenditures on investments in local research and development with local institutions;
- The Policy must require operators, contractors and sub-contractors to develop and share Local Content Procurement Plans and Local Employment Plans. These plans will be critical to overcome the information gap that currently exists. However, developing these plans is not sufficient. Targets should be realistically set and progress should be monitored and evaluated at least bi-annually. This will create a useful set of information on local employment and contracting linked to the extractive industry to inform future plans. The plans should also be standardized to a large degree so that they are easily disseminated and understood in the local market;

- The Government of Mozambique must recommit itself to enforcing existing local content clauses already found in the legal framework such as the Procurement Law. The Policy would be a good opportunity to do so in a cohesive manner under a unifying theme. The Resource Governance Index gives Mozambique a failing grade. Across its four components used to formulate the Index – institutional and legal setting, reporting practices, safeguards and quality control, and enabling environment – Mozambique scores poorly: 46 out of 58. While these criteria don't directly address local content issues, they do underscore the weaknesses in the overall governance of the sector and point to the current inability to properly manage the foundational elements of the extractive industry [27];
- Any Policy should be tied into sector planning and development strategies. This will help coordinate an approach to industry support and could be useful in synchronizing local content targets with baseline measures already accepted by the Government;
- Local Content Policy must stress partnership with the private sector through co-funding, co-design and aligning objectives. There are good reasons for large extractive companies to want reliable local supply chains. They can reduce cost and provide greater security of resources. It will be important to the success of any LC initiative that it target in the short and medium term value chains that pose a strong commercial viability for the extractive industries. This approach will facilitate greater participation and investment from the large companies in the sector;
- A Local Content Policy should also make provisions for strengthening the financial sector in Mozambique through local commercial banks and the capital market. An underlying enabler to greater growth for enterprises will be the ability to access finance. It is equally important to help strengthen the capital markets and banking system so greater percentages of profits can be retained locally and this money can be then reinvested into the economy;
- The Government should consider collaborating with the large extractive firms the establishment of independent business development centers (with third-party technical assistance) to help SMEs improve their capacity and quality (see Trinidad and Tobago Local Content Chamber) located around key growth centers and corridors (decentralized and in the field). This “third-party” approach may be most effective in allocating responsibility between public and private sectors most efficiently and result in better results in market linkage programs, technical support and advisory services to SME's, information dissemination and sharing, procurement support to SMEs, and overall business support services. The example of the Economic Development Center (EDC) in Nigeria's Delta is useful as a model. Although too soon to claim complete success, signs that the EDC is being effective in addressing local content and supporting local supply chains in a market-driven manner are positive;
- All local content initiatives should be synchronized with ongoing business enabling environment support projects and SME development support initiatives. Examples such as the World Bank's new Growth Pole project offer great opportunities to leverage existing resources and technical assistance to accelerate the implementation of local content activity and to reach a greater scale of effectiveness.

7. NEXT STEPS

This Assessment is intended to initiate a conversation within the Government of Mozambique on how to best treat local content in the current economic environment where natural resource exploitation dominates the development agenda. While the issues are both politically and socially sensitive, the Government must be cautious in weighing its options in an effort to select the optimal course of action based on the lessons learned from other countries and the economic development needs of Mozambique. As a starting point, developing a Local Content Policy Framework can be a first step towards addressing not only how the growth in the extractive industry can benefit local economic development but also how the Government can use this new opportunity to recommit to a wide-scale improvement of the business enabling environment.

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CHAPTER 5
BUSINESS ENVIRONMENT
ASSESSMENT OF THE EVOLUTION
OF THE BUSINESS ENVIRONMENT
IN MOZAMBIQUE 1996 – 2013

October 2013

EXECUTIVE SUMMARY

The purpose of this document is to demonstrate unequivocally that efforts over the last nearly two decades to improve the business environment and strengthen the private sector in Mozambique have been insufficient. Its goal is to raise awareness of these failings and to act as a call to action within three key groups: the domestic private sector, the government, and the donor community.

Section 2 provides some background on business environment reform in Mozambique, makes the case for the need for this report, and sets out the methodology used and the main constraints encountered.

Section 3 attempts to situate Mozambique's business environment and investment climate within the international context. Limited reforms in the past 18 years have not resulted in substantive change for most businesses. The pace of reform appears to have stagnated, despite the efforts of the private sector and significant investments (over 10 billion dollars) by donors and government. This stagnation is reflected in Mozambique's business confidence index (nearly inert for two decades), its Doing Business ranking (146th of 185 countries in 2013) and its performance in the UN's Human Development Index (second from the bottom of 186 countries in 2013).

Section 4 explores the mechanisms through which public-private dialogue take place in Mozambique and how these have evolved over time. It is based on a close examination of CASP (Annual Private Sector Conference) documents and qualitative interviews with private sector leaders. Despite an ongoing dialogue process at national level between the government and CTA through the CASPs, the reforms required to enable Mozambique's economy to develop in order to provide jobs and allow for wealth creation is not taking place.

In this meeting [13th CASP] we will see the results of the efforts made by the public and private sectors, optimising synergies for the greater good of the business environment and showing clear results in the performance of the national economy – Armando Inroga, Minister of Industry & Commerce, 2013

Commitments are made, but follow-through is lacking; and crucially, there is no broad consensus between public sector, business and civil society about how to achieve economic development. Statements about economic development based on the private sector such as PARPA, ENDE or EMAN, recognize business and particularly SMEs as crucial to employment and broad based growth. However, these are not transformed into concrete action in terms of legislation that is then effectively implemented.

Section 5 identifies key issues that have been raised by the private sector through the CASP mechanism over time, grouped into sector-specific and cross-cutting categories:

Sector-specific issues (# raised)	Cross-cutting issues (# raised)	
<ul style="list-style-type: none"> • Agriculture (18) • Tourism (16) • Industry (10) • Fisheries (4) • Judiciary (3) • Mining (1) 	<ul style="list-style-type: none"> • Transport (39) • Tax, customs and external trade (21) • Public sector / State Administration (11) • Public Works (10) 	<ul style="list-style-type: none"> • IT and Telecoms (10) • Finance (10) • Labour (9) • Commerce (6) • Crosscutting (5)

While each of these categories contains many issues, grouping them illustrates an overall pattern of concerns raised by business over an 18 year period.

Section 6 begins with an exploration of the national policy framework for private sector development in Mozambique. Although significant effort and investment have gone into the development of strategies and policies relevant to the private sector (particularly 2006-2009), the need for policy improvements continues to arise on the CASP matrices, demonstrating that the national policy framework is not meeting the private sector's needs and expectations.

For example, despite the creation of the 2007 industrial policy, the need for an industrial policy recurs in the 2012 and 2013 CASP matrices. Despite the creation of the 2006 tourism marketing strategy, the need to promote and develop the national image in the tourism sector continues on the matrices until 2011. Quality standards related issues continue to arise on CASP matrices up until 2010, despite the existence of the 2003 quality policy and strategy.

We would like to express our indignation at the very slow pace of reforms in the country. - Rogério Manuel, CTA President, 2013

This section also provides a very high-level summary of the EMAN evaluation, and short assessment of the regulatory environment. It notes that regulations tend to be fragmented and sectoral, developed by individual ministries with limited consultation with government counterparts or business. Examples of complexity include: tourism licensing regulations, fiscal legislation and the raft of labour regulations. Further, regulations often do not reflect the policies they are meant to implement.

Things do not happen because it is a structural and midset problem. We all know that the ministries and institutions are working in isolation from each other. – BEE Interviewee 4

Section 6 also contains a comparative analysis of CASP themes over time, EMAN target results, EMAN II specific objectives and activities, and the latest CAC. Given the Government took a strategic decision to focus EMAN II more narrowly than EMAN, how will important issues not covered by this strategy be addressed over the five-year period of EMAN II.

Among the CASP themes, only two – (1) registration and licensing and (2) insolvency and recovery – are wholly reflected in EMAN II. While there is value in some of the activities included in EMAN II, they will not address (within the next five years) key issues consistently raised by the Private Sector such as inefficiency at ports and borders, illegal imports, and excessive bureaucracy and corruption. The vast majority of CASP issues have not been integrated in EMAN II, and there is no indication of if or how they can be addressed outside it.

Another point of note is the obvious lack of alignment between the CAC (the monitoring mechanism for agreements under CASP) and EMAN/EMAN II. This anomaly raises an important question: what is/should be the relationship between the public-private dialogue and monitoring processes (CASP and CAC) and the government's strategy for business environment improvement?

Section 7 begins with a look at the commitment the international community has made to development of the private sector in Mozambique, and questions whether the expected results have been achieved. It then looks at EMAN implementation at macro level. This is followed by a closer look at some specific issues raised through the CASP mechanism over time: investment and trade-related issues, government and governance-related issues, and legal issues.

Section 8 begins with a high-level overview of a number of contributing factors that typically impede reform: political will, structure and capacity within private sector organizations, and public sector capacity. It also explores briefly issues related to protectionism and public sector intervention in the private sector.

Section 9 concludes the report. The main take-aways from the analysis are as follows:

The reform envisaged in the mid-1990s has not materialised. Reports from the annual private sector conferences show repetition of the same messages at each conference, accompanied by a notable lack of concrete action.

Donor investments of relevance to the private sector have not yielded results. Over 10 billion dollars has been projected for spending on projects with private sector relevance between 2001 and 2015. While some of these funds are grants, others are soft loans which Mozambique will have to pay back. A critical question is therefore whether the private sector has developed sufficiently to create the wealth needed to pay back these loans.

A shared vision for Mozambique's development and an accompanying overarching policy for business environment are lacking. Mozambique has no broad Investment Climate Improvement or Business Competitiveness strategy. Instead, policy is developed sectorally, and is often followed by fragmented, complex, overlapping, and even contradictory regulations that are difficult for the private sector to comprehend and for the public sector to implement.

Policy reform has not been followed by implementation. The lack of implementation has been attributed to: lack of political will; insufficient political power within government bodies tasked with overseeing reform; resistance among functionaries who benefit from the existing system; and poor capacity within the public sector, especially in the provinces, to absorb regulatory changes.

Reforms undertaken have been small-scale 'tweaks' rather than paradigm-shifting, structural changes. A tendency towards smaller reforms or adjustments which could provide "quick wins" is noted, and this is attributed to: powerful forces within the political structure whose interests would not be served by deeper reforms; weaknesses in the CASP mechanism; and a need to demonstrate some successes resulting from the public-private dialogue under pressure from donors for quick wins within short-term funding cycles, rather than a long-term integrated approach to structural reform.

The lack of development has given rise to protectionist tendencies that may stifle private sector growth. There has been a recent focus in public-private dialogue and discussions within the private sector on restricting the business environment by legislating local content and shareholding, and protecting business based on the passport carried by the majority of shareholders.

Public-private dialogue mechanisms have not delivered on their initial promise and should be significantly strengthened. Even with the political will for the types of reform proposed, the format of the CASP matrices and conference is not conducive to promoting and then monitoring reform; this requires much more intense dialogue through transparent, inclusive and efficiently managed mechanisms. The main impediments to a functioning dialogue system are, firstly, open, inclusive, transparent and systematic dialogue between government and business and, secondly, the lack of the same within the private sector itself.

A new window of opportunity for business development is opening up now with the natural resource boom taking place in Mozambique, but high growth rates may lead to complacency among government leaders. Extractives-sector-led growth will not lead to broad-based economic development, large-scale job creation and widespread improvements in human development. The major question facing both business and government now is therefore whether or not the brave steps required for a total reform are going to be taken or whether public-private dialogue is going to continue with tweaking and piecemeal changes, which often do not have a major impact, are frequently poorly implemented and may add unnecessary costs and burdens.

The report concludes with four recommendations:

- Policy – there should be one, overarching economic development policy, led from the highest levels of government, as a result of which every thought, action, regulation, levy, fee etc. should be analysed based on its benefit to business, and structured accordingly;
- Legislation – legislation should in all cases reflect faithfully the related policy. It should be clear, simple and overall implementable. To improve the quality and relevance of legislation, the draft Public Participation Law (Lei de Participação Pública) should be approved and implemented immediately to not only ensure broader access to debate on legislation and policy for the private sector but for civil society as a whole;
- Implementation – Ministers should be directly accountable to the Prime Minister or the President for the effective and timely implementation of policy decisions and associated regulation for which they are responsible. Communication and dissemination of new regulations – to the private sector, common citizens, and especially functionaries tasked with legislative oversight and implementation – should be prioritised;
- Impact – progress and achievements should be monitored and assessed on the basis of impact, measured in terms of the experience of the majority of firms, rather than on the completion of activities.

INTRODUCTION

BACKGROUND

Business development and thus wealth creation and employment are critical to improving human development. There is a direct connection between an improved business environment, broad based growth, income generation and poverty reduction. Conducive legal, regulatory and administrative frameworks are a necessary precondition for this chain to develop. Proactive, supportive policies and strong public and private institutional structures working as delivery mechanisms are also needed.

The links between a strong, vibrant and diverse private sector, facilitated by a supportive business environment, and job creation and increased tax revenues for economic and human development have long been recognized in Mozambique. Annual dialogue between the government and the private sector has been ongoing since 1995, and in the intervening period the government has undertaken a number of reforms aimed at improving the business environment.

The private sector's interest is to prosper, grow and consolidate itself, while the government in its turn is interested in protecting the private sector as one of the key instruments for resolving the problems of society. The government (...) will continue its support and study ways of increasing it, so that the private sector can participate significantly in reducing unemployment by creating jobs (...) so that the private sector can serve as the lever with which to raise our people's living standards and eradicate extreme poverty – Joaquim Chissano, President, 1998.

At the XIII edition of Mozambique's annual private sector conference - CASP (Conferencia Anual de Setor Privado) held on the 8th March 2013, the Minister of Industry & Commerce, Armando Inroga, indicated that the government has complied with 80 percent of its targets for business environment reform. His comments coincided with the conclusion of the first phase of the EMAN (Estratégia de Melhoramento de Ambiente de Negócios – Business Environment Improvement Strategy) and preparations to implement a second phase of business environment reform (EMAN II) as well as the launch of a draft of ENDE (Estratégia Nacional de Desenvolvimento – National Development Strategy). Five months later, the CTA's report to the National Business Council (CEN) showed that only four of the twenty-one priorities agreed at the 2013 CASP were considered 'completed'.

Despite the government's optimism about its business environment reform policy and actions, SME growth and job creation have been minimal and growth continues to be limited to sectors dominated by major international investors (e.g. extractives and financial services). Companies continue to report being negatively affected by uncertainty in the business environment, unpredictable application of legislation, and other barriers to investment. Indeed, the results of the annual Business Confidence Index (BCI) and the World Bank's Doing Business indicator surveys paint a very different picture to that expressed by the government. This leads to questions about what has been achieved since the first CASP in 1995.

In this meeting [13th CASP] we will see the results of the efforts made by the public and private sectors, optimising synergies for the greater good of the business environment and showing clear results in the performance of the national economy – Armando Inroga, Minister of Industry & Commerce, 2013.

Conservative estimates based on the number of young people joining the electoral role indicate that the economy needs to create at least 300,000 new jobs per year. Such large-scale job creation can only come from rapid development of key sectors such as agriculture, tourism and labour-intensive industry, and from a massive expansion and development of the SME sector. Major investments (known as mega-projects) will contribute significantly to state revenue, but they will not create jobs at scale. Indeed major investments planned for the next few years run the risk of increasing inflation and thus pushing up costs for those who can least afford it, while the country has not succeeded in import substitution, particularly of staples such as food.

The problems faced by business and the challenges which the country faces as a result of the resource boom, are complex. However, the greatest challenge facing civil society may be convincing the government that there is a problem. In public statements, government representatives regularly indicate that they believe that significant reform has taken place, the business environment is much improved and that the growth of the economy is based on increased numbers of companies opening and/or investing.

The country continues to be a destination of choice for investment and there is a determination to continue reforming to benefit business. - Aiuba Cuereneia, Minister for Plan & Development, 2013.

Therefore, before the type of deep business environment reform required can take place, business is faced with the challenge of presenting a united front and speaking out in order to convince the government that more radical, far-reaching and rapid reform is required if the country is to truly take advantage of the coming resource boom, in a way that benefits everyone.

Recognizing that the assessment is only semiannual we would like to express our indignation at the very slow pace of reforms in the country - Rogério Manuel, CTA President, 2013.

In order to have a chance to influence policy it will not be sufficient for one organization to speak out. Instead it will be necessary for a group of influential Mozambican decision-makers and opinion formers from across civil society to lend the weight of their own voices and those of the organisations they represent to a concerted movement for change.

However before this can take place it is necessary to evaluate what has been called for and what has been done in respect of improvements to the business environment in the past 18 years, since the first private sector conference in 1995. This requires a comparison of the CASP matrices, EMAN I and its outcomes, the BCI and Doing Business surveys. By examining progress in the dialogue mechanism provided by CASP alongside actions taken in EMAN and the resulting rise or fall of business confidence (BCI) and world rankings (Doing Business), this report aims to present an overview of the impact of reforms to date, and highlight what remains to be done.

PURPOSE

The purpose of this document is to demonstrate unequivocally that efforts over the last nearly two decades to improve the business environment and strengthen the private sector have been insufficient. Its goal is to raise awareness of these failings and to act as a call to action within three key groups: the domestic private sector, the government, and the donor community.

It is hoped that this analysis will pave the way for the sort of open and constructive dialogue that marked the earliest public-private consultations, and that this dialogue can be transformed into deep and meaningful reform that is implemented at all levels.

METHODOLOGY AND CONSTRAINTS

This report was developed based on a desk review of the following documents:

- Doing Business Indicators 2004-2012
- Business Confidence Indicators 1998 – 2012
- CASP matrices and reports 1996 – 2013
- EMAN I and II
- OECD and World Bank reports on public-private dialogue

(And other documents included in the bibliography in section 11.)

In addition semi-structured, qualitative interviews were undertaken with a number of key players involved in business environment reform over the past 18 years with a view to gathering their reflections on what has and has not worked, and why, and what business should do going forward to ensure more far-reaching and substantive reform is achieved.

A major constraint to developing this report was access to information. Few of the documents required for the analysis were available electronically and many were difficult to source in hard copy. One outcome of the research will be the digitalization and uploading of key materials so that in future they will be more readily accessible.

Another challenge was comparability of data. Methods of presenting key issues changed significantly over time and it was difficult to cross-reference data between reports, even from the same organization. In addition clear indicators and monitored results with specific indications of how outcomes have been gauged as “complete” was lacking in most documents. Issues raised or targets established were found to disappear and reappear over the years but with no indication of why this was the case.

Analysis of the CASP reports is made complex by:

- Regular changes in format of tables of activities to be undertaken
- Regular reclassification of activities
- Activities dropping off and then reappearing on matrices, sometimes under different classifications, with little or no indication of why issues have been included or excluded, or moved
- Lack of clear indicators or monitoring of outcomes

As a result, the contents of the CASP reports have been summarized to identify key themes over time. The report contents are broken down into broad sectors based on those indicated in matrices, or allocated into the most appropriate sector in matrices where no sectoral division was provided. To place the analysis in historical context the authors have included a series of quotations from the CASP reports. The authors present the following report with the caveat that the analysis is of necessity generic, and key issues have been grouped into themes, due to the lack of consistency of reporting in source materials.

1. AGGREGATE BUSINESS ENVIRONMENT INDICATORS

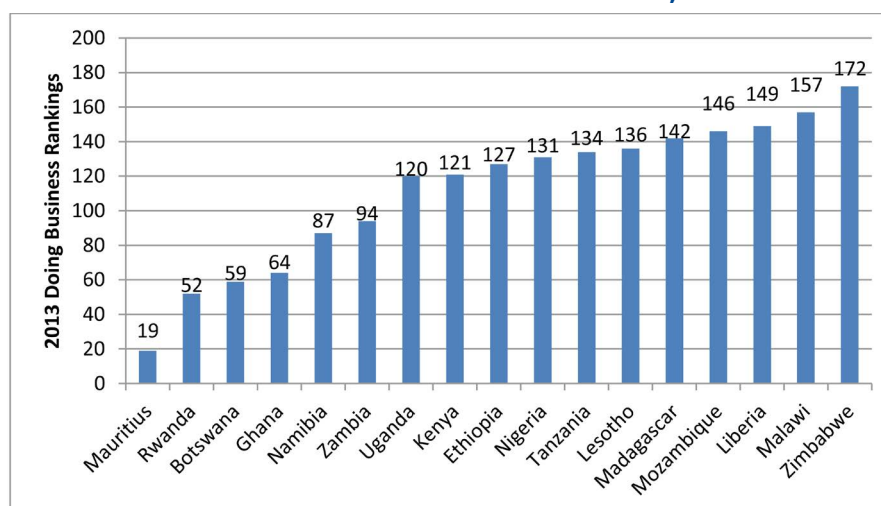
Mozambique is very poorly positioned against its peers, and the domestic private sector continues to struggle with an unfavorable business environment and investment climate.

1.1. MOZAMBIQUE IN THE INTERNATIONAL CONTEXT

This section attempts to situate Mozambique's business environment and investment climate within the international context. It is primarily based on the World Bank's Doing Business ranking, which presents quantitative indicators on business regulations and the protection of property rights that can be compared across 185 economies. Doing Business measures the following areas/indicators: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts, resolving insolvency and employing workers.

In 2013, Mozambique ranked 146th out of the 185 countries included in the ranking. Figure 1, below, shows the most recent Doing Business rankings for seventeen African economies, among which only Liberia, Malawi and Zimbabwe rank lower than Mozambique.

FIGURE 1: DOING BUSINESS RANKINGS, 2013



Despite criticisms of methodology, this ranking provides a global benchmark for business environment reform and performance. It is used by many to determine the state of a given business environment and can therefore have a significant impact on foreign direct investment.

I usually tell everyone who talks about this, if they have any small business, because it is much easier to feel it on the skin. Not only of how difficult is it to do business, but the level of degradation of the conditions favorable to business. Things are getting worse every day – BEE Interviewee 4

The need to speed up reforms is urgent also because Mozambique must compete in an increasingly integrated international market (...) it is no longer enough to compare the situation in Mozambique with its own past, but also with the rapid changes that are occurring throughout the region and around the world. - FIAS report on administrative barriers to investment, 2001

When the ranking is considered over time, it is clear that Mozambique has not strengthened its business environment as quickly as other countries. Table 1, below, shows that Mozambique was ranked below 80 percent of other economies studied in 2007 (see 3rd column, Relative percentage).

TABLE 1: MOZAMBIQUE'S DOING BUSINESS AGGREGATE RANK AND DISAGGREGATED INDICATORS, 2007 - 2013

	DB Report	Absolute Global Rank	Relative (%)*	Starting a Business	Protecting Investors	Enforcing Contracts	Getting Electricity	Registering Property	Getting Credit	Dealing with Construction Permits	Paying Taxes	Trading Across Borders	Resolving Insolvency
	DB2007	140/175	80%	153	83	168	..	105	83	103	80	141	126
EMAN**	DB2008	134/178	75%	125	33***	138	..	126	97	147	72	140	134
	DB2009	141/181	78%	144	38	124***	..	117	123	153	88	140	133
	DB2010	130/183	71%	96	41	129	..	153	125	159	98	136	135
	DB2011	126/183	69%	65***	44	132	..	144	128	155	101	133	129
	DB2012	139/183	76%	82	46	132	174	160	127	135	103	135	146
	DB2013	146/185	79%	96	49	132	174	155	129****	135	105****	134	147

Source: www.doingbusiness.org

* 1 percent being the best positioned country and 100 percent the worst positioned country.

** DB2013 reported progress from June 2011 through May 2012. EMAN monitoring report dated July 15 2012 reported an 80% of average completion of the indicators. Conversely, the country had dropped 1% point from when EMAN started in 2008 (DB2009) and 10% points from DB2011 (20 positions).

*** A good momentum was lost. Reflected on DB2010, DB2011 and BCI/LAN DB2009.

**** Tax & External Trade and Finance are at the top of every CASP matrix, sharing 31 issues between them over time According to the Doing Business these sectors keep getting worse every year.

Mozambique improved its relative position by 2010, but in 2013 its ranking was back to its 2007 level, showing no progress at all from an international comparative perspective during the same period in which the first EMAN was implemented.

The picture is no better when disaggregated indicators are considered. In fact, during the implementation of the EMAN, Mozambique's relative rankings have significantly worsened in terms of protecting investors, registering property, getting credit, dealing with construction permits, paying taxes, and resolving insolvency. While some progress was noted during the middle of the EMAN implementation, momentum seems to have been lost in recent years, and a general downward trend is noted.

Other international indices paint a similar picture. The World Economic Forum's Global Competitiveness Index ranked Mozambique above only Chad, Guinea, Sierra Leone and Burundi in Sub-Saharan Africa in 2012-13 (see below).

FIGURE 2: WORLD ECONOMIC FORUM GLOBAL COMPETITIVENESS INDEX RANKING (REGIONAL), 2012-2013

Rank	Economy	Score	Rank	Economy	Score
52	South Africa	4.4	121	Ethiopia	3.6
54	Mauritius	4.4	122	Cape Verde	3.5
63	Rwanda	4.2	123	Uganda	3.5
76	Seychelles	4.1	128	Mali	3.4
79	Botswana	4.1	129	Malawi	3.4
92	Namibia	3.9	130	Madagascar	3,4
98	Gambia, The	3.8	131	Côte d'Ivoire	3.4
99	Gabon	3.8	132	Zimbabwe	3.3
102	Zambia	3.8	133	Burkina Faso	3.3
103	Ghana	3.8	134	Mauritania	3.3
106	Kenya	3.7	135	Swaziland	3.3
111	Liberia	3.7	137	Lesotho	3.2
112	Cameroon	3.7	138	Mozambique	3.2
115	Nigeria	3.7	139	Chad	3.1
117	Senegal	3.7	141	Guinea	2.9
119	Benin	3.6	143	Sierra Leone	2.8
120	Tanzania	3.6	144	Burundi	2.8

1.2. DOMESTIC PERCEPTIONS OF THE BUSINESS ENVIRONMENT

Just as the Doing Business ranking provides an international benchmark of the business climate, so the annual Business Confidence Index (BCI) provides an indication of the domestic private sector's perceptions. The BCI is an annual survey conducted by KPMG and the Confederation of Economic Associations (CTA), which includes a representative sample of firms of all sizes, in all provinces and in ten key sectors¹. Respondents are asked to rate their level of confidence related to 42 specific factors grouped in 7 categories: macroeconomic factors; financial and credit market related factors; trade and investment factors; infrastructure and services related factors; government and governance factors; labour factors; and legal factors. Figure 3, below, shows the evolution of the BCI since its inception.

FIGURE 3: EVOLUTION OF THE BUSINESS CONFIDENCE INDEX, 1998 - 2012



Source: BCI 2013

The first point to note is the marked decrease in business confidence between 1998, the first survey and high-point in its history, and 2000, which marked the survey's low point.

This [CASP] mechanism began in 95/96. Then in 2001 or so, there was a disruption; the “courtship” of those first 5 years, those sayings that people seemed willing to move forward, that they wanted to do things. More speech than action, but people at least had a feeling that they could do things. However, there has never been a fertile willingness to do it – BEE Interviewee 5

Initial optimism followed the first few CASP meetings, the nearly-annual public-private dialogue that began in 1995, but seems to have waned when the promise of those early meetings was not realised.

The second important point is the lack of any meaningful improvement in business confidence since 2000, despite the proliferation of business environment reform strategies, policies and legislation.

We have changed a lot (...) but if you go deep down into the details of that change, there is a lot left to be done. This country is still not competitive (...) Most [reforms] did not happen because there was no implementation ability. There was no capacity to implement anything that was decided; we continue to be weak in government implementation ability – BEE Interviewee 1

Qualitative evidence based on a interviews with key informants suggests that policy reforms that were expected to dramatically improve the business environment, and which would logically be reflected in increasing business confidence and higher Doing Business rankings, have simply not been implemented.

¹Sectors included in the BCI: agriculture and fisheries; food and beverages; banking, leasing and insurance; commerce and services; communication, information and IT; construction and construction materials; energy and fuel trade; tourism and hospitality; manufacturing; and transport, terminals and related services.

Section 5, below, explores the recurring themes in public-private dialogue over the last 18 years, and section 6 looks at these themes as they relate to the national policy framework. Section 7 then considers the question of implementation in more detail by looking at specific areas where reform has been proposed through public-private dialogue and subsequently formalised as policy, but where the expected impact of reforms have not been felt by the private sector.

The following section looks at the history of public-private dialogue in Mozambique.

2.HISTORY OF PUBLIC-PRIVATE CONSULTATION AND CURRENT STRUCTURES

The government can possess no credibility, and dialogue cannot be productive, unless the private sector feels that property rights are guaranteed, that the state's arbitrary power is limited, and that its promises can be relied upon. (OECD, 2007)

According to the OECD, the objectives of public private dialogue include building trust, bridging gaps, laying the foundation for joint problem analysis, and identification of policies and institutional reforms that contribute to a more conducive environment for private sector development (OECD, 2005). Mozambique's poor international ranking and almost static levels of business confidence show that the long-standing dialogue between the government and the private sector has not been effective. This section explores the mechanisms through which such dialogue takes place and how these have evolved over time. It is based on a close examination of CASP documents and qualitative interviews with private sector leaders.

2.1.STRUCTURE OF CONSULTATION MECHANISMS

The institutional structures that effective public-private dialogue requires have long been established and are, as international agencies recommend, closely aligned to national institutions. The most central of these is the Confederation of Economic Associations(CTA), an organization comprising private sector associations and business that works towards a better business environment in Mozambique. CTA has its headquarters in Maputo and three regional offices, one in the South (Maputo City), and another in Central Mozambique (Beira City) and the last in the North (Nampula City). CTA liaises with the Government and other public institutions through Working Groups, the National Business Council (CEN), and Provincial Business Councils (CEP). CTA has a Governing Board which meets at least monthly to make policy decisions and monitors the activities of the Executive. The Executive Directorate in turn implements the activities plan and budget approved by the General Assembly of CTA. The Executive Directorate is comprised of the following units:

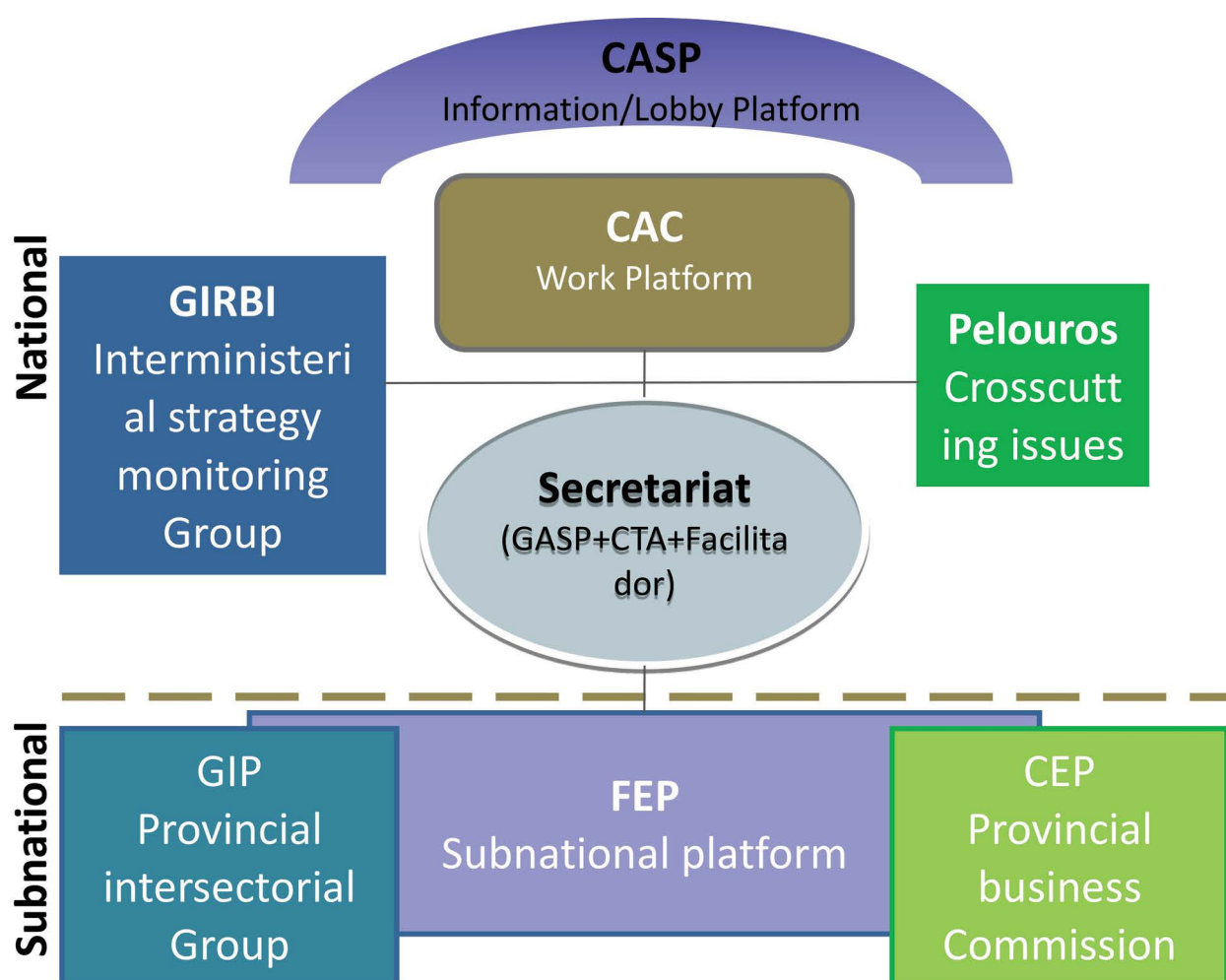
- Consultative Mechanisms (MCs);
- Membership Development and Institutional Relations (UDARI);
- Research and Economic Analysis (UIAE);
- Administration and Finance (UAF);
- Regional Antennas (South, Central and North),
- Provincial Business Councils.

The main area of CTA intervention is the Public Private Dialogue (also known as Consultative Mechanisms), comprised of 10 working groups (Pelouros) that works with assistance and support from the Executive Directorate. Specific mechanisms under this umbrella are:

- Annual private sector conference with the President (CASP)
- Annual private sector conference in the regions (CASP Regional)
- Consultation meeting with the Prime-Minister (CAC)
- Sectorial Meetings with Ministers and/or National Directorates (Pelouro Meetings)

The current structure of public-private dialogue mechanisms are set out in Figure 3, below:

FIGURE 3: STRUCTURE OF PUBLIC-PRIVATE DIALOGUE MECHANISMS



Source: Presentation by Orlando da Conceição, CTA Executive Director, at the Public-Private Dialogue 2010 Workshop, Vienna.

A second important body is the Private Sector Working Group (PSWG), established after the [donor] Consultative Group held in Paris in October 2003. The PSWG is comprised of:

- Government ministries, agencies and bodies with connection to private sector activities, which are represented by the Private Sector Unit of the Ministry of Industry and Commerce;
- Multilateral and bilateral donors' institutions active in private sector development.

The overall objective of the PSWG, according to its terms of reference, is to:

“Establish a forum of dialogue among donors, government, private sector operators and civil society to jointly gather, analyze, discuss and prioritize, follow-up and monitor policy-related issues pertaining private sector activities in Mozambique directed towards joint recommendations for actions to be taken to improve effectiveness and efficiency of all stakeholders' actions related to the exercise of private sector activities².”

Let us now turn to the history through which the CASP-related structures have developed.

2.2. HISTORY OF CONSULTATION MECHANISMS

A balanced and intelligent combination of public and private sector remains essential for sustainable economic development. A full and meaningful partnership is based on open and constructive dialogue – Pascoal Mocumbi, Prime-Minister, 1997

No documentation is available for the first private sector conference, so this analysis begins with the second private sector conference, which was held on the 11th July 1996 in Beira and on the 12-13th July 1996 in Maputo. The tone of the conference document was hopeful, and there was great emphasis placed on both the value of the dialogue and on the importance of implementation. In the preface, the World Bank's Simon Bell indicates “The prospects for real action at last seem possible so that (...) both sides will be able to demonstrate concrete results from their on-going dialogue.” This view was echoed by the British High Commissioner, Bernard Everett who stated “two basic principles are universal: it is to the private sector that we must look for wealth and job-creation and it is only through partnership and through discussion that government and the private sector will be able to successfully define their respective roles.” He went on to say “meetings like this one do not in themselves represent change. They agree and define what needs to be done. They record intentions. But they have to be followed up and implemented; ...Discussion, consultation and implementation are ongoing requirements”.

The main challenges facing the private sector, and the respective roles of the government and the private sector in addressing them were discussed. The Director General of the Italian Development Cooperation, Gianfranco Varvesi noted “the major obstacles to private investment – both national and foreign – [include] an outrageous system of regulations impacting on economic activities and the labour market, disadvantaging investors because of its lack of transparency, while simultaneously creating a fertile breeding ground for corruption.”

In addition to the needed legal reforms, it is extremely important to institutionalize the channels of communication between the private sector and government. Particularly important is the need for the government to change its attitude towards the private sector. The government needs to view the private sector more as its partner in developing the national economy - Lucinda Cruz – Ernst & Young, 1996

²Time constraints do not allow for an analysis of the interactions between the PSWG and the CASP mechanisms, but such an analysis would contribute to the much-needed discussion on how to strengthen public-private dialogue processes for greater impact on the business environment.

Oldemiro Baloi, then Minister for Industry, Commerce and Tourism closed his speech saying “the role of government should not go beyond regulation of economic activity so as not to inhibit the initiatives of the private sector (...) the suggestions for change are disorganized and it cannot be left to the government alone to sort them out. It is the responsibility of the private sector to come up with an organized plan (...) it is worthwhile to pursue a dialogue with the government – even if the dialogue is often repetitive”.

These general themes were revisited over the subsequent private sector conferences, which were increasingly led by CTA, the need for the creation of which arose out of the early conferences. Over time the conferences became known as CASP, and a total of 13 were held between 1995 and 2013. The first five conferences (1995-1999) are generally marked by optimism; however, from the conference reports, the initial enthusiasm and commitment to dialogue and reform can be seen to wane over the intervening 13 years.

We also had people in government at the time, who helped it happen. I can also say that the Minister of Industry and Trade was the current Minister of Foreign Affairs, Oldemiro Baloi. And he was very interested that there were changes, because the business environment in the country did not allow for investors to come and feel free to invest – BEE Interviewee 4

The sixth conference, in 2001, was the first conference after the 1999 general election and the floods of 2000. The format was changed somewhat because, according to CTA Chair Egas Mussanhane, “the previous versions had been shown to be unsatisfactory” and over 50 of the objectives identified in previous meetings had not been achieved. He later said “despite the great effort expended and the actions undertaken, we must accept that these have not yet produced palpable results for the majority of the population, nor the great majority of firms”.

So in 2001, the disruption takes place. The 5 year “courtship” ended and we got into a long list of things to do and nothing happened. So we now have a smaller list. And yet they are not reforms. They are small-scale “tweaks”. – BEE Interviewee 5

This was a view echoed by President Chissano who indicated “the steps taken until now show us that, although the merit of these events [CASPs] is unquestionable, there are nevertheless lessons to be drawn, namely with respect to their breadth and format, and above all in relation to monitoring and implementation of recommendations”. As Carlos Morgado, Minister of Industry & Commerce admitted at the 6th conference “the problem raised [lack of progress] relates to the public sector’s difficulty in accommodating the concerns presented by the business community in its programme of work. This situation tends to create a false, albeit legitimate, impression of insensitivity among those who have to live with the problems and expect an answer”.

Contrary to previous conference reports, wherein the tone of dialogue is generally friendly and at least on the surface indicates a willingness to engage, the seventh conference is marked by disillusionment on the part of the private sector and irritation and defensiveness on the part of the government. President Chissano lamented “perhaps we were excessively ambitious when we defined the main questions in 2000. On the other hand we have the perception that tasks have been carried out which were not in the matrices and therefore are not included in the balance of achievements thus creating a false impression of lack of progress”.

The eighth conference, held in 2004, continued to highlight the lack of progress, noting that the previous conference’s matrices were “overly ambitious and not well focused on results”, and that “the resolution of identified problems and the implementation of prerequisite actions continue to be very weak”. Sector-specific working groups (pelouros) were established in this conference.

Following CASP VIII, CTA commissioned a Business Environment Assessment (funded by USAID) “as a result of stalemates having occurred between the perceptions of the private sector and the convictions of the Government”. The assessment surveyed 150 firms around the country and aimed to provide “a large base of opinion, credible and technically sustainable data (...) allowing the private sector to confirm or reinforce its position, and permitting the government to compare and correct its operations”.

The assessment found that while “significant improvements have taken place (...) major disillusionment was prevalent. “The report cites centralization and excessive bureaucracy as particularly problematic: “In the majority of cases opinions on quality, delays and costs of service show deterioration in direct relation to the distance between the area where the service is provided and the Capital. One can therefore also conclude that it is not only that the regulations are so complex and require absurd processes and collections of documents and incomprehensible levels of decision-making, but also that the process of moving the documents from one place to another is a further factor which causes extraordinary increases in costs and time periods.” It blames “the lack of professional training of those involved as well as (...) a complete lack of understanding of what professional dignity and public service are” and stresses that “a revolution in understanding and attitude through systematic and aggressive training campaigns is vital”. The assessment documented procedures (e.g. time and costs, procedures as experienced by business and according to law), and provided comprehensive recommendations for reform.

Nevertheless, three years later, the report of the 10th Conference ³, held in November 2007 in Maputo, continues to highlight the frustration felt by the private sector. CTA President Salimo Abdula stated in his address to the conference “we propose that the major challenge should be consolidating dialogue in seeking for solutions aimed at improving the business environment”. And despite all evidence to the contrary, President Guebuza assured participants that “on the part of the government, the availability remains total for the continuous improvement of the business environment and the removal of administrative barriers to investment are at the core of our agenda”. The 2007 conference saw the largest matrix of proposed reforms presented to that date.

The fact is that, what was done is not enough compared to what should have been done. We did not make reforms; we made small “tweaks” – BEE Interviewee 5

Somewhere between the clear plan presented at the second conference in 1996 - which called for the complete implementation of the recommendations arising from the first IFC/FIAS analysis of Mozambique’s business environment, and which showed the optimism of the delegates that this would in fact be done - and the massive list of reforms proposed by the private sector in 2007, very little concrete reform was accomplished. Four years later, speaking at the closing session of the 12th CASP, President Guebuza said “the public-private dialogue should evolve to a stage where, as partners, we feel that we share responsibilities in carrying it through effectively. In this sharing of responsibilities we shall understand that each side is under pressure to deliver, and has demands to make, because we are all impatient and want to move more quickly”.

At the 13th CASP, Armando Inroga, Minister of Industry & Commerce said “it is only by working together that we can achieve better results on this path that we are walking together, the destination of which is bold reform, quickly implemented to ensure a more competitive position for Mozambique in the regional economy, and indeed why not the global economy”. For his part, CTA President Rogério Manuel repeated the private sector’s recurring refrain: “without deep reform Mozambican business cannot compete in an ever faster, more globalised world; and reform must be directed towards reducing the time, cost and administrative procedures of doing business in Mozambique”.

Looking at the matrix, if I make a virtual matrix from the first day, after 18 years, the situation has not changed much. – BEE Interviewee 2

³ The last fully-published conference report.

The lack of progress over the past 18 years seems to have resulted in the dialogue mechanism manifested through the CASP becoming formulaic and stale. From 2007 there seems less commitment to the dialogue process, with conference reports not being published, matrices not being publicly available and major issues such as infrastructure improvements not appearing. The overall priorities of business have changed little in the intervening 18 years (see Table in the following section). Clearly reform has taken place and Mozambique is not the same place as it was in 1995, but the far-reaching, deep structural reforms envisaged in the early conferences have not taken place and business is still calling for greater dialogue and reform to enable the economy to develop.

We are starting and so we are confronted with what are the difficulties of those who are beginning the path -
Alberto Vaquina, Prime Minister, 2013

3. RECURRING THEMES IN PUBLIC-PRIVATE DIALOGUE

The main issues of concern to the private sector are known – they have been raised repeatedly in nearly two decades of dialogue. This section identifies key issues that have been raised by the private sector through the CASP mechanism⁴. It begins with an overview of the types of issues raised through the CASP and recurring themes, and then takes a high-level look at policy and the business environment. Section 7 considers specific issues in some detail.

Although specific issues raised through the CASP mechanism have varied over time, there has been great consistency in the themes that appear from year to year. Table 3, below, groups 173 distinct issues raised through the CASP mechanism into sectors and themes.

Table 3: Thematic groups of issues raised through the CASP mechanism, 1996-2012

Issues range from very specific (reduction of cost of non-intrusive inspection, lack of consultation with private sector

Sector-specific issues (# raised)	Cross-cutting issues (# raised)
Agriculture (18) Tourism (16) Industry (10) Fisheries (4) Judiciary (3) Mining (1)	Transport (39) Tax, customs and external trade (21) Public sector / State Administration (11) Public Works (10) IT and Telecoms (10) Finance (10) Labour (9) Commerce (6) Crosscutting (5)

in the development of ProAgri II) to very general (production costs make the agriculture sector uncompetitive, lack of an industrial policy). Overall the issues included have become more specific over time and the number of issues being presented or included, having reached a peak in the period 2006 – 2009, reduced between 2010 -2012 when an attempt was made to create a “top 10”, and increased again slightly in 2013.

Table 4, below, groups the main issues that have been raised through the CASP mechanism under the categories of factors that impact business confidence used in the BCI survey⁵ and demonstrates that the BCI survey accommodates most of the non-sector-specific concerns of the private sector. The lack of improvement in the BCI over time is therefore one indication, among many, that the concerns of the private sector are not being addressed.

The following quotes from the earliest dialogues show how little things have changed:

An important problem concerning administrative barriers in Mozambique is the uncertainty of the outcome. Companies initiate processes without knowing how and when they will end - Aracelli de Leon – IFC/FIAS, 1996

⁴ The first annual conference between the private sector and government was held in 1995. Unfortunately documentation from that meeting is not available. Therefore this analysis is based on the conference report books prepared between 1996 and 2007, and electronic summaries provided by CTA for the period 2007 – 2013. A series of quotations from conference documents provide an overview of the issues raised, and the general tone of dialogue.

⁵ Issues that cannot be mapped to the BCI themes are grouped under either 'sector-specific issues' or 'cross-cutting issues'.

When the company is in operation it is the overhead created by excessive paperwork and compliance with taxes and labour regulations that has become an issue for reform. The main cost of administrative barriers to private activity in Mozambique are brought about by unpredictability of processes and the prolonged time it can take to complete all steps to operate legally. - Aracelli de Leon – IFC/FIAS, 1996

The development of the country, and in particular, of the private sector cannot be achieved without clear institutional reform, we intend to transform the public sector from a centralized bureaucratic institution into an efficient and innovative player which will encourage and support private initiative. The decentralization and removal of administrative barriers is crucial to our plans and strategy for socio-economic development – Pascoal Mocumbi, Prime-Minister, 1997

We are fully aware that incentives are not the only variables underlying private sector development and investment decisions. Transparent policies and healthy procedures, norms and practices, complemented by a skilled labour force, complete the package. In this framework our government is deeply committed to creating a favourable business climate – Joaquim Chissano, President, 1998

Table 4 organises issues into three groups: those that relate to policy, those that relate to institutions, and those that relate to the general business environment. These major thematic areas intersect and in many cases contribute to or exacerbate each other.

Four groups of factors particularly stand out:

- Trade and investment related factors;
- Infrastructure and services related factors;
- Government and governance related factors;
- Legal factors.

While each of these categories and sub-categories contains a wealth of issues, grouping them in this way illustrates an overall pattern of concerns raised by business over an 18 year period. These categories are examined in further detail in section 7 Analysis of specific areas.

The issues in Table 4 have been aggregated from CASP matrices from the last 18 years, but a quick scan shows that the vast majority of them remain relevant today.



TABLE 4: MAIN CASP ISSUES MAPPED TO BCI THEMES, AND CASP ISSUES OUTSIDE SCOPE OF BCI SURVEY

	Financial and						Outside scope of BCI survey		
	Macro-economic factors	Credit markets factors	Trade and investment factors	Infrastructure and services related factors	Government and governance factors	Labour factors	Legal factors	Sector-specific issues	Cross-cutting issues
Policy/Legislation	<i>Fiscal & monetary policy</i> – taxation on key sectors (particularly agriculture and tourism), wide variety of taxes, levies and fees, exchange rate management;		<i>Fiscal & monetary policy</i> – external trade costs and inefficiencies, exchange rate management;	<i>IT and telecoms policy</i> – lack of development in the sector;	<i>Anti-corruption</i> Public sector reform, good conduct and anti-corruption	<i>Labour Law and related regulations</i> –minimum wage unsustainable, employment of expatriate labour, HIV/AIDS, social security		<i>Agricultural policy</i> – lack of development in the sector, land not useable as collateral; <i>Tourism policy</i> – lack of branding and promotion of Mozambique as a destination, lack of integration with other sectors (e.g. immigration, police) to provide a positive impression to tourists, visa policy; <i>Industrial policy</i> – lack of development in the sector;	<i>Commercial policy</i> – lack of development of sector particularly in rural areas; <i>National business development</i> – lack of development, lack of engagement in key sectors, requirement for protection and stimulation; Lack of quality standards
Institutions			Independent regulatory authorities – lack of these in the transport sector (air, rail in particular);	Justice system – perceived non-functioning court system, lack of transparency and accessibility, lack of use of alternative dispute resolution;				Ineffective dialogue between the public and private sectors	
Business Environment	<i>Access to finance</i> <i>Cost of financial services</i>	<i>External trade</i> – customs complexity and costs, regional integration, border infrastructure and operation, inefficient port operations; Globalisation – policies, procedures, standard and systems incompatible with the region and wider world;	<i>Infrastructure</i> – lack of infrastructure impeding sectoral development in all key sectors, poor quality and high cost of infrastructure, lack of competition (air, rail, ports), lack of internal road, rail, air and maritime transportation; <i>Cost of factors</i> – electricity, water, fuel, telecoms, IT, transport, construction materials	<i>Attitudes to business</i> – inspections, lack of cross-sector integration to facilitate business, arbitrariness/ uncertainty, slow payment for state procurement. <i>Bureaucracy</i> - obsolete procedures, delays in issuing documents of all types; <i>Centralisation</i> and state intervention; <i>Lack of transparency</i> – corruption/hidden costs (e.g. municipal, provincial, transport, port, customs, other levies and fees), inconsistent enforcement, lack of information, governance, criminality;	Lack of qualified human resources	<i>Legislation</i> – difficulties with implementation (delays, bureaucracy), complexity; lack of legislation in key areas (fisheries, diving, bankruptcy), legislation perceived to be out of step with modern market economy; <i>Legal compliance</i> - illegal and grey trade, intellectual property protection, general lack of legislative enforcement across key sectors, unfair competition, lack of transparent state procurement, lack of tax rebates	<i>Agriculture</i> – lack of development in the sector, land not useable as collateral; <i>Tourism</i> – lack of branding and promotion of Mozambique as a destination, lack of integration with other sectors (e.g. immigration, police) to provide a positive impression to tourists, visa policy; <i>Industry</i> – lack of development in the sector;	<i>Cost of factors</i> – raw material costs and lack of local production. <i>Access to information</i> – on among other things legislation and proposed reforms, procedures to be followed in implementation of legislation, credit, procurement;	

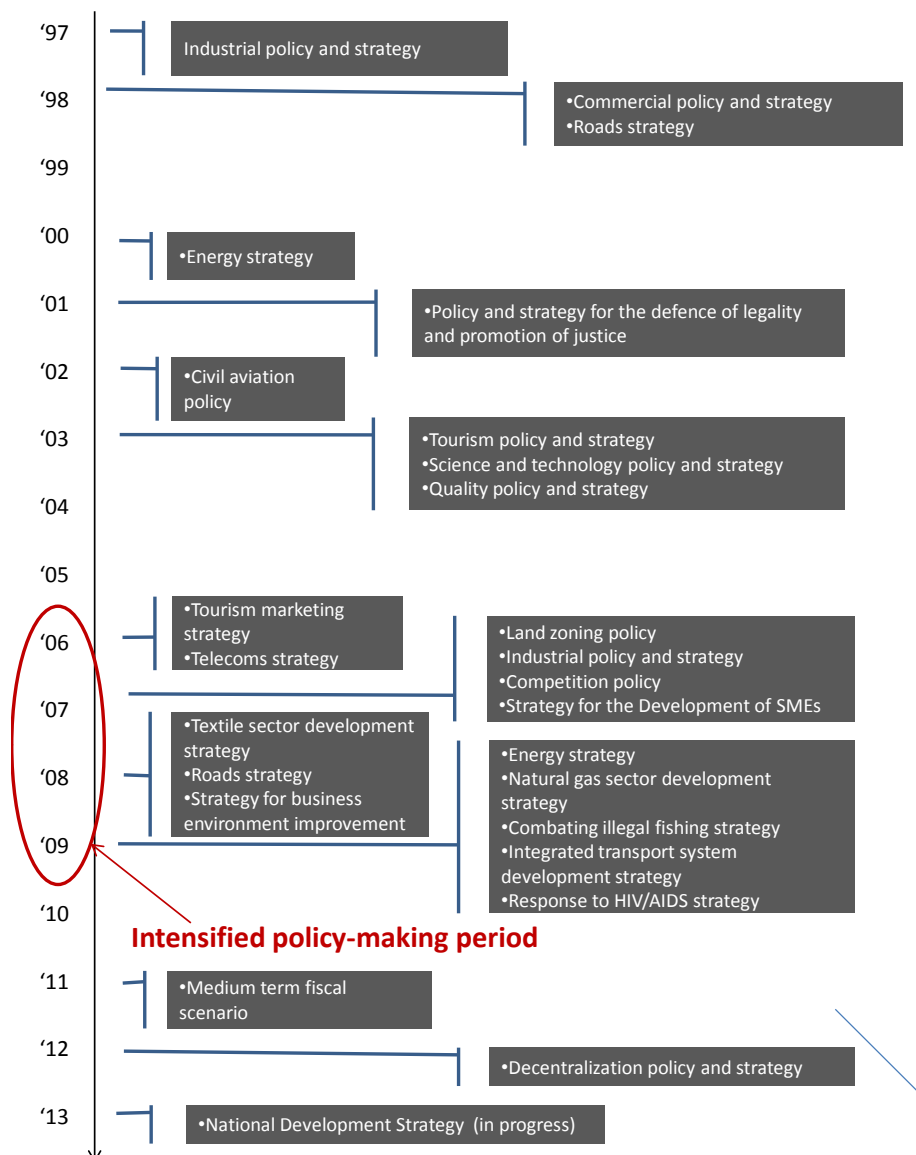
4. POLICY - ADDRESSING THE CONCERNS OF THE PRIVATE SECTOR?

Policy reform has been ambitious, but has lacked a unifying vision. Policy is not coherent, has not been translated to relevant and simple regulations, and is often not implemented or enforced. Policy sets the stage for meaningful improvements in the business environment. The national policy framework creates a platform for private-sector-led growth, large-scale job creation, and economic and human development. Policy must be relevant, coherent, and, crucially, implemented. There is little evidence, however, that the Mozambican policy framework meets these criteria.

4.1. POLICY OVER TIME

Significant effort and investment have gone into the development of strategies and policies relevant to the private sector, particularly between 2006 and 2009 (see Figure 4):

FIGURE 4: RELEVANT STRATEGIES AND POLICIES, 1997 - 2013



Nevertheless, the need for policy improvements continues to arise on the CASP matrices, demonstrating that the national policy framework is not meeting the private sector's needs and expectations.

This country has good sectoral policy; in agriculture we have a development policy, we have a fiscal policy, we have them in almost all sectors. Rare are those cases, where there is no policy – BEE Interviewee 2

For example, despite the creation of the 2007 industrial policy, the need for an industrial policy recurs in the 2012 and 2013 CASP matrices. Despite the creation of the 2006 tourism marketing strategy, the need to promote and develop the national image in the tourism sector continues on the matrices until 2011. Quality standards related issues continue to arise on CASP matrices up until 2010, despite the existence of the 2003 quality policy and strategy.

The revision of legislation, although important, is not a goal in itself. What is important is its implementation, for which both the private and public sectors must strive. To this end we must continue to improve our internal organization and disseminate the changes widely, so that our objectives are achieved - Oldemiro Baloi, Minister of Industry, Commerce & Tourism, 1998

Salient questions, which should be answered through focused dialogue between the public and private sectors, are therefore: Which existing policies are considered inadequate by the private sector, and why? And, where policies are considered appropriate but implementation is inadequate or inconsistent, what concrete steps can be taken to improve implementation?

4.2. EMAN OVERVIEW

The central policy documents related to business environment reform are the Business Environment Improvement Strategy, 2008-2012 (EMAN), and EMAN II, 2013-2017, which was approved in September 2013. EMAN was evaluated in mid-2012, and this section draws heavily on that document.

The overall objective of the EMAN is to “reduce absolute poverty levels, through the promotion of rapid, sustainable and inclusive economic growth, focusing on the creation of an environment favourable to investment and to the development of national entrepreneurship, and of the realization of actions in education, health and rural development.”

EMAN includes an implementation matrix that consists of four Domains – Fiscal and Financial Environment, Legal Reform, Infrastructure, and Governance - 5 Objectives, 25 Results and 55 Activities. Although not comprehensive, the evaluators considered EMAN “very relevant at the ...stage of development that the Mozambican business environment had in late 2007 and early 2008.” A mapping of issues from the CASP matrices against EMAN target results, however, shows that the issues EMAN aimed to address were in fact raised by the private sector much earlier. The fact that they had not been addressed in over a decade of public-private consultation (1995 – 2008) raises questions about the legitimacy of the dialogue, the political will to implement reforms, and the implementation capacity of government at all levels.

In our country's case there is also lack of a common and shared vision about the country's development strategy. What is the country going to use to develop? Mineral resources? Agriculture? Tourism? Transport and logistics? Or what is the strategy for each area of the country? We do not have a common response to this. Do not have a shared vision. This shared vision is for everyone to have awareness of what we want to achieve and wake up every day knowing that we will work to contribute to that common goal.– BEE Interviewee 4

The EMAN evaluators also noticed gaps in the strategy's scope, and recommended that “the new Strategy for Improvement of the Business Environment be broad-based, even including areas left out in EMAN today, such as road transport improvement, as there is no other broad Investment Climate improvement or Business competitiveness strategy in the country.”

(...) thematrices have been treated in what in fact does not constitute the backbone. I say this because if you look at the matrices and revisit them, there are points that have been there since then and are still there – BEE Interviewee 3

The pace of reform of the business environment in the country does not meet the expectations of the private sector - Orlando da Conceição, CTA Executive Director, 2010

But there is a very important document missing: A written commitment which states that each of these ministries should address a specific problem listed in the matrix with concrete deadlines and concrete human resources listed. What happens now is that during the meeting there is an apparent commitment and then we relax– BEE Interviewee 2

I felt that at the highest levels, of ministers and the president, there was an understanding and a consciousness that the reforms had to happen, but the problem was with mid- and low-level functionaries resistant to change. So the processes slowed; and today, 18 years later, we still have [many] problems to resolve (the majority of these from that time). – BEE Interviewee 2

4.3. REGULATION

The regulatory environment is theoretically determined by the policy / strategic environment, with policy and strategy guiding the development, content and implementation of legislation.

Given that there is no overarching policy framework for business development it is not surprising that the regulatory environment is largely unfavourable to business and develops in an ad hoc manner. As the CASP VIII summary indicates “there is a prevalent tendency to legislate “everything” and a belief that the legislation must be complex in order to be good. This overly-complex legislation leads to corruption which increases transaction costs and creates uncertainty. The weaknesses of the legal framework also result in excessive fines and penalties applied to business and individuals”.

Regulations tend to be fragmented and sectoral (see Figure 4: Relevant strategies and policies, 1997 - 2013, p. 26), being developed by individual ministries with limited consultation with other government counterparts, or business.

Things do not happen because it is a structural and midset problem. We all know that the ministries and institutions are working in isolation from each other. – BEE Interviewee 4

Examples of complexity include the tourism licensing regulations, fiscal legislation and the raft of labour regulations. Additional regulations in this area would do little but add additional complexity when in fact sector or business-specific requirements could be included in collective bargaining agreements or internal regulations developed between business and its employees without the need for state intervention.

Without a guiding policy and strong commitment from the government as a whole to business development, regulatory change will continue to be sporadic, unpredictable and unfocussed. It will continue to not respond to the needs of business because legislators do not have an overall goal of business development in mind when drafting, nor do they understand the needs of business and how “their” piece of legislation fits within the greater whole of business environment reform and economic development. While regulatory changes may offer “quick wins” by improving international rankings, if they are not set within a wider policy structure, or correctly implemented they will continue to be piecemeal and merely “tweak” the legal framework rather than leading to deep reform.

The issues listed above cascade directly from the lack of a favourable policy and regulatory framework. Without a coherent, government-wide approach to ensuring the development of business, it is not surprising that the overall attitude to business is bureaucratic and regulatory implementation is uneven and uncertain.

4.4. POLICY AS A RESPONSE TO PUBLIC-PRIVATE DIALOGUE

As background to the analysis undertaken in this section, it should first be noted that the international evaluators of EMAN saw the lack of any other broad investment climate improvement or business competitiveness strategy as a critical issue, as do the authors of this report. The EMAN evaluators therefore proposed that the subsequent strategy (EMAN II) be broadened to include four components (1. Business Cycle Simplification, 2. Legal and Fiscal Rights and Reforms, 3. Supporting Services, and 4. Local Economic Development) and two cross-cutting themes (A. Microenterprise Development and B. Governance, Transparency and Communication). At the same time, they acknowledged that, since many EMAN activities were not implemented, a greater focus (rather than a broader scope) might be warranted. In the end, the GOM (Government of Mozambique) chose the latter approach: EMAN II is much more focused than EMAN was, with only two overarching aims: simplifying the business cycle and improving business competitiveness. These are expressed in terms of 12 specific objectives (see Table 5):

TABLE 5: EMAN II SPECIFIC OBJECTIVES

Simplifying the business cycle	Improving business competitiveness
1 – reduction in the time for licensing of economic activities 2 – simplify the business cycle 3 – reduction of time for construction licensing 4 – reduction of complexity in the payment of duties and taxes	5 – Operationalisation of the Insolvency and Recovery Law 6 – Operationalisation of the Competition Law 7 – reduce the positive list (related to pre-embarkation inspection) 8 – reduction of costs in the agriculture and fisheries sectors through complete VAT exemption 9 – reduction in transaction costs 10 – reduction in administrative costs (licensing) license 11 – promotion of access to financing 12 – reduction in the cost of credit

Commentators closely involved in the development of EMAN II agree with this approach, and feel positive about the strategy’s potential to be implemented. Cautious optimism may therefore be warranted.

Given that a more narrow focus within EMAN II was a strategic decision taken by the Government, the obvious question is how, over the 5-year term of EMAN II, important issues not covered by this strategy can be addressed. The rest of this section considers this question based on an analysis of CASP matrices⁶, EMAN and EMAN II, and the most recent list of issues presented at CAC. It aims to highlight important gaps in the government’s policy response to the ongoing public-private dialogue and to point out certain points of incoherence among these policies and monitoring mechanisms. Cross-cutting (i.e. non-sector-specific) CASP issues, can be loosely grouped as follows (see Table 6):

TABLE 6: CROSS CUTTING CASP ISSUES

BCI factor groupings	CASP themes
Legal factors	Registration and licensing Protection of creditors * Insolvency and recovery
Trade and investment factors	Customs – import/export
Macroeconomic factors	Taxes
Financial and credit markets	Credit and Access to finance
Infrastructure factors	Road transport Liberalised airspace Water and electricity Telecommunications and internet
Labour factors	Labour
Government and governance factors	Governance and corruption
Policy and legislation (not a BCI category)	Competition Industrial policy Commerce

** This theme is included under ‘legal factors’ rather than ‘financial and credit markets’ because it relates to creditors’ legal right to protection, and how the judiciary enforces those rights.*

⁶ As indicated above analysis of the CASP reports is made complex by:

- Regular changes in format of tables of activities to be undertaken
- Regular reclassification of activities
- Activities dropping off and then reappearing on matrices, sometimes under different classifications, with little or no indication of why issues have been included or excluded, or moved
- Lack of clear indicators or monitoring of outcomes

As a result the contents of the CASP reports have been summarized to identify key areas over time. The report contents are broken down into broad sectors based on those indicated in matrices, or allocated into the most appropriate sector in matrices where no sectoral division was provided.

Table 6, summarises key issues raised through the CASP mechanism over time, and attempts to link these to EMAN target results, EMAN II specific objectives and key activities, and priority issues noted in the latest CAC presentation. CASP issues (first column) marked in ‘bold’ are those which appear to have been dropped from the public agenda (i.e. neither resolved (to the private sector’s satisfaction) nor included in EMAN II).

The first point of note is that, among the CASP themes, only two – (1) registration and licensing and (2) insolvency and recovery – are wholly reflected in EMAN II ⁷. Other themes – specifically: customs (import/export), taxes, credit and access to finance, and governance (“cost of transactions”) – are included in EMAN II, but will not be one hundred percent resolved even if EMAN II is fully implemented. This is to say that while the EMAN II planned activities will (if implemented) certainly bring progress in these areas, they will not wholly address the issues raised by the private sector through the CASP mechanism. For example, EMAN II includes two specific objectives related to customs/import & export: #7 – reduce the positive list (related to pre-shipment inspection) and #9 –reduction in transaction costs. The related activities are focused on process(e.g. decreasing the number of items subject to pre-shipment inspection and conducting a study on the inspection process (activities to improve the process after the study is completed may be added to the strategy), improving the scanner system), and on decreasing the cost of import and export (though it is unclear how).

Ways and means must be found to overcome the huge problems and challenges that exist including high operating and transaction costs that reduce the competitiveness of small firms and serve as negative incentives to new investment – namely the price of fuels, the costs of loading and unloading in the ports, the excessive costs of telecommunications, coastal shipping, banking services, air transport and costs of energy. Overcoming these problems demands permanent dialogue between the government and private sector, through CTA – Egas Mussanhane, 2001

While there is value in some of these activities, they will not address (within the next five years) issues of inefficiency at ports and borders, illegal imports, short-sea-shipping (cabotage), the cost and systemic issues raised by the introduction of the Janela Unica, and excessive bureaucracy and corruption. The EMAN evaluators also advised against running parallel strategies in related or overlapping areas because of the risk of confusion among implementing agencies and the complexity of overseeing separate but related strategies. Are these issues therefore ‘on hold’ for the foreseeable future? Might there be other means through which they could be addressed?

A second example is EMAN II’s approach to taxes. The strategy’s specific objective in this area is #4 – reduction of complexity in the payment of duties and taxes, with activities focused on simplifying procedures. Again, while needed and very useful, it will not address the need, raised repeatedly by the private sector, to reduce the overall tax burden in order to promote a culture of paying taxes and expand the tax base.

In tourism for example it is found that there is a lot of resistance to open the airspace. Although the official discourse say that the air space is liberalized, this actually is not so. There are a number of traps and mines set up that do not easily allow foreign companies to come to Mozambique. – BEE Interviewee 3

The second key point of note, and corollary to the first, is of course the fact that the vast majority of CASP issues have not been integrated in EMAN II, and there is no indication of if or how they can be addressed outside it. Some of these (for example: enforcement of contracts, uniform inspections, cabotage, lower cost road and air transport and electricity, and ‘good governance’) were listed as target results in EMAN but have not been carried forward to EMAN II. This might suggest that these issues have been resolved, but that is not the case. One explanation could be that some of these issues have not appeared on the most recent CASP matrices and were therefore not prioritized for EMAN II. Yet a number of them (e.g. privatization of notarial services, cabotage, VAT rebates, liberalised airspace, infrastructure improvement, labour issues) remain as relevant as ever. As above, a discussion of how these issues might be addressed without derailing the EMAN II implementation is needed.

⁷ That is not to say that these issues will be resolved if EMAN II activities are fully implemented, as the strategy’s indicators are is still framed in terms of activities and directly-related outcomes rather than the impact on the private sector’s experience. For example, an appropriate target for ‘registration and licensing’ might be: “SMEs in all provinces and sectors are registered and licensed within one week and experience zero petty corruption”.

The third key point of note from Table 7 is the obvious lack of alignment between the CAC (the monitoring mechanism for agreements under CASP) and EMAN/EMAN II (see the mostly blank last column). This anomaly raises an important question: what is/should be the relationship between the public-private dialogue and monitoring processes (CASP and CAC) and the government's strategy for business environment improvement?

TABLE 7: MAPPING OF KEY ISSUES BETWEEN CASP, EMAN, EMAN II AND CAC

	CASP issues – cross-cutting *	EMAN target results **	EMAN II specific objectives	Key EMAN II activities and comment (in italics and brackets)	CAC 2013
Legal factors (BCI)	Registration and licensing				
	Improvement in the licensing system (2003-2010) Simplify the registration, creation and licensing of companies (2003-2007, 2012-2013) Revised Regulation for Commercial Licensing (2009) Simplify procedure for allocation of NUIT (2010) Excessive bureaucracy and lack of knowledge at the counters of ministries (2004-2006)	1.1 Simplified Registration 1.2 Simplified Licensing 1.9 Registration and Collateral simplified 4.1 Establish and develop One-stop-shops (BAUs)	Specific objective 1 – reduction in the time for licensing of economic activities Specific objective 2 – simplify the business cycle Specific objective 3 – reduction of time for construction licensing Specific objective 10 – reduction in administrative costs (licensing) license	Integration of the BaU in the government's e-platform (sectors of commerce, industry, tourism, and simplified regime). Decrease # days for licensing from 15 to 10 and from 1 day to one hour under the simplified regime. Introduce the 'single form' (reducing the # forms required to 3) and adjust the legal framework Introduce online licensing Reduce the time for construction licensing from 377 to 89 days Reducing the tax applied to licensing and the cost of a construction license.	Integrated digitization of licensing processes
	Protection of creditors				
	Protection of creditors' rights and insufficiency of guarantees (2004-2007)	2.3 Enforcement of contracts, claims and collateral 5.1 Comply with contracts		[These issues seem to have been dropped]	
Legal factors (cont.)	Insolvency and recovery				
	Bankruptcy and recovery Code (2007)	1.4 Company Insolvency and recovery Law	Specific objective 5 – Operationalisation of the Insolvency and Recovery Law	Create the association of bankruptcy administrators; train administrators and the judiciary	
Trade and investment factors (Ind. Barriers to export) (BCI)	Customs – Import/Export				
	Improving management of customs (1996, 1998) Import of raw materials for industry (2001, 2006-2009) Delays and costs associated with customs clearance of goods (2004-2007) Revised procedures of customs clearance including border operation (2004-2010) Exchange procedures regarding import and export of goods and services not favorable to international trade (2010) Problems in the cabotage sector (2004-2007, 2010) Single Window System (2010-2011) Pre-shipment Inspection (2010-2013)	1.7 Uniform and compatible inspections 1.8 Import-export systems simplified and lower cost 1.11 Competition in short-sea-shipping (cabotagem) 5.5 Information on potential investments available	Specific objective 7 – reduce the positive list (related to pre-embarkation inspection) Specific objective 9 – reduction in transaction costs	Review the positive list subject to pre-shipment inspection, decreasing the number of items from 144 to 115 Conduct a comparative study on the legal framework and execution of non-intrusive inspection - no follow-up action envisaged Introduce good practices for goods inspection (scanner) Reduce the cost of imports (by 16 percent) and exports (by 36 percent) [issues of inefficiency at ports and borders, illegal imports, excessive bureaucracy and corruption are not addressed; the issue of short-sea-shipping and uniform & compatible inspections have been dropped]	Non-intrusive goods inspection (scanner) Positive list – pre-embarkation inspection Reduction in the cost of transactions [no info on specific objectives or progress]

TABLE 7: MAPPING OF KEY ISSUES BETWEEN CASP, EMAN, EMAN II AND CAC

	CASP issues – cross-cutting *	EMAN target results **	EMAN II specific objectives	Key EMAN II activities and comment (in italics and brackets)	CAC 2013
	Taxes				
Macroeconomic factors (including taxes) (BCI)	The tax system is complex heavy with many exemptions, the tax base is reduced, there is corruption and disincentives (1996) Fiscal policy discourages investment, production and job creation, too complex, high rates, resulting in tax evasion (2001-2007) Revision of the tax code (2007-2012) Review and approve the Fiscal Benefits Code and its rules (2010-11)	2.1 Simple and not burdensome fiscal system 5.3 Promote a culture of paying taxes	Specific objective 4 – reduction of complexity in the payment of duties and taxes	Simplify procedures for payment of taxes and charges and reduce the # forms through piloting an e-tax system (online submission of declaration and payments) [This approach ignores the need to reduce the number of taxes and the overall tax burden in order to promote a culture of paying taxes and expand the tax base.]	
	VAT in agriculture inputs (2006-2013)		Specific objective 8 – reduction of costs in the agriculture and fisheries sectors through complete VAT exemption	Conduct a study to analyze the impact of the introduction of full exemption of the VAT Code in Agriculture and fisheries, and implement the recommendations [Commitment dependent on results of study.]	IVA Exemption in Agriculture Implementation of the incentive for gasoline for agriculture
	Exemption from customs duties and tax charges on fuel for the fishing industry (2012-2013)				Approval of customs duty exemption on gasoline destined for fishing vessels
	Reduction of the VAT rate (2007-2011)				
	Credit and access to finance				
Financial and Credit markets related factors (BCI)	Credit registration central, access to information (2004-2013) Cost of credit, access to finance Notice 5/GGBM/2005 (credit in foreign currency) (1996-2004, 2010, 2013) Access to finance in IT (2004-2007) Microfinance and rural finance (2004-2006)	2.4 Promote SME access to credit 2.5 New Financial products	Specific objective 11 – promotion of access to financing	Increase the use of identity cards (BI) and NUTI's [no specific targets; seems more related to informalism and increasing the tax base] Disseminate information about sources of alternative funding to SMEs [does not address reach of such funds, or SME capacity to apply for funds] Increase options for guarantees [no targets]	
		2.2 Credit and Insurance information bureaus	Specific objective 12 – reduction in the cost of credit	Define the legal framework; Create and operationalize the central registration of collateral; operationalise a central register of borrowers and credit risk	Creation of a central credit register
	Road transport				
Infrastructure related factors (BCI)	Proposal for establishment of the Transport Regulatory Body (2010 - 2013) Transportation costs prohibitive for development (2003) (Transport) Failure to comply with compulsory insurance law, concessioning inspection services (2004-2009)	3.3 Reduced fuel costs		[These issues seem to have been dropped]	Creation of a regulator for the transport sector Update road transport tariffs

TABLE 7: MAPPING OF KEY ISSUES BETWEEN CASP, EMAN, EMAN II AND CAC

	CASP issues – cross-cutting *	EMAN target results **	EMAN II specific objectives	Key EMAN II activities and comment (in italics and brackets)	CAC 2013
Infrastructure related factors (BCI) – continued	Liberalised air-space				
	Aviation Legislation (2006-2010) Number and quality of landing fields (2006-2009, 2012) Management of the Institute of Civil Aviation of Mozambique (2007, 2012-2013) Effective liberalization of airspace (2006-2007, 2012-2013)	1.10 Competition and lower cost air transport		[CAC notes that liberalization of airspace has been achieved, but there is still no domestic competition to bring down the cost of air transport.]	Liberalization of airspace Clearance Management of the Institute for Civil Aviation
	Electricity and water				
	Quality and cost of energy for the Industry Sector (2001-2010)	3.1 Electric energy with quality, safety and reliability 3.2 Supply energy at competitive cost 5.4 Set up and make operational waterregulator		[These issues seem to have been dropped]	
	Telecommunications and internet				
	Lack of national telecoms network, high cost(2001-2007)	3.5 Increased access to Internet 5.4 Set up and make operational telecom regulators			
Labour related factors (BCI)	Labour				
	Lack of skilled labor (2001-2003, 2006-2007) Legislation and spirit of inspections (2001-2007) Employment of foreigners (2003-2007) Lack of staff in IT (2004-2007) Mediation and Arbitration (2003-2010) Operation of INSS (2003-2010) Minimum wage policy (2003-2010) Labor law and complementary regulation (2003-2013)	1.3 Labour legislation promoting employment			Conclusion of regulation related to the Labour Law
Government and governance related factors (BCI)	Governance and corruption				
	Reform of the public sector to reduce bureaucracy and promote good conduct and good governance (2003) Anticorruption Law (2012)				
	Judicial system (2001-2007) Crime *** (2006)				
	Late payments by state and VAT refunds and payments (2001-2011) Procurement rules and disclosure of public procurement (2001-2010) Outdated legislation, inadequate, (1996-1998, 2003)	5.2 Good governance in public and private institutions	Specific objective 9 – reduction in transaction costs	Comparative study of the legal framework and execution of non-intrusive inspections [EMAN governance target was too general, but the spirit has been lost in EMAN II]	Reduction in the cost of transactions [no info on specific objectives or progress]

TABLE 7: MAPPING OF KEY ISSUES BETWEEN CASP, EMAN, EMAN II AND CAC

	CASP issues – cross-cutting *	EMAN target results **	EMAN II specific objectives	Key EMAN II activities and comment (in italics and brackets)	CAC 2013
Policy and legislation	Competition				
		1.5 Competition Law and regulation	Specific objective 6 – Operationalisation of the Competition Law	Prepare the regulations of the competition law; create and operationalize the competition authority, and train the judiciary	
	Industrial policy				
	Lack of industrial policy to boost the development of the sector, funding (2001, 2004, 2012-2013)				Study on industrial policy and the need for an industrial fund.
	Quality (1999); standards and quality in industrial production (2001-2010)				
	Intellectual property legislation (2006-2009)				
	Commerce				
	Illegal trade, control of foreign trade (1999, 2001-2003, 2006) Reform of Commercial Code (2001-2003) Strategy and integrated policy of trade (2004-2007)				

* *Bold indicates CASP issues that seem to be 'off the table'*

** *Bold = not carried forward to EMAN II (achieved or dropped?)*

*** *Also rose as a key negative factor in the BCI consistently since 2008.*



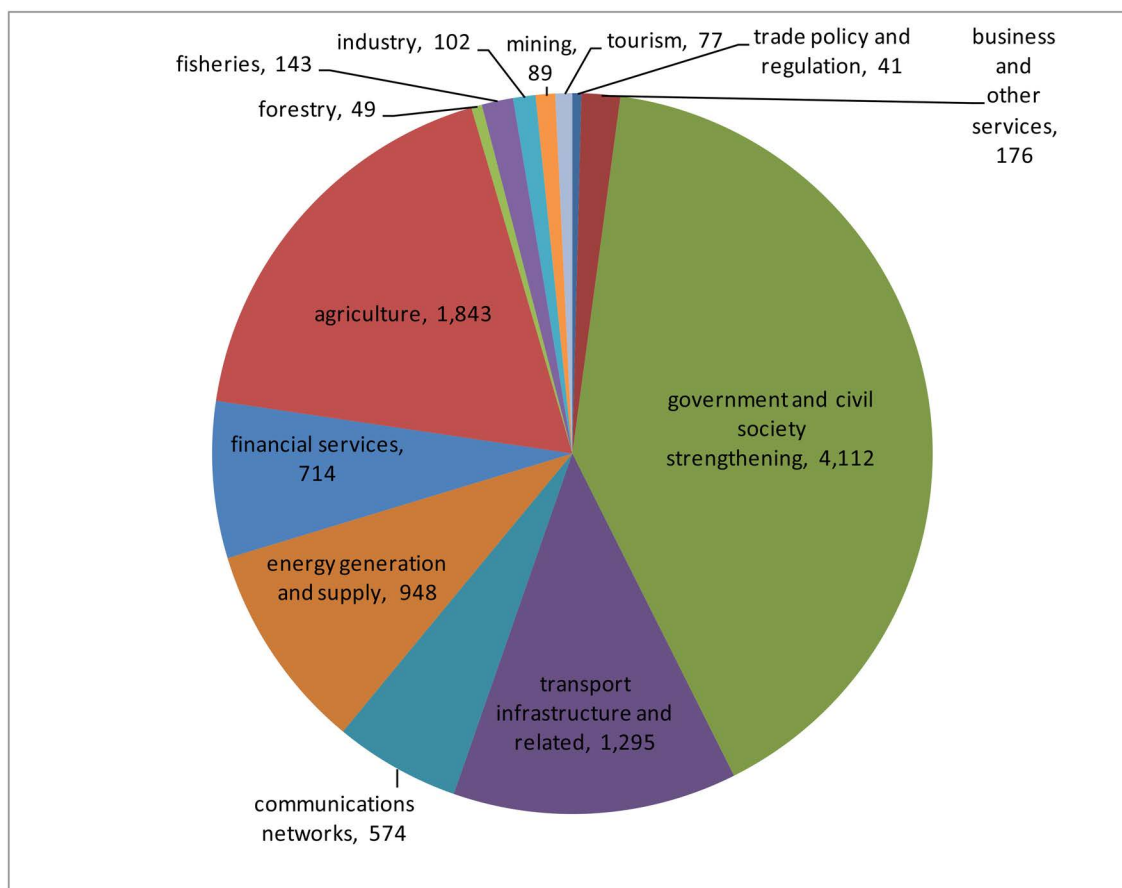
5. ANALYSIS OF SPECIFIC AREAS

Despite billions of dollar invested in private sector related programs, and despite government commitments to reform over nearly two decades, very little progress has been made in key areas of concern to the private sector. This section begins with a look at the commitment the international community has made to development of the private sector in Mozambique, and questions whether the expected results have been achieved. It then looks at EMAN implementation at macro level. This is followed by a closer look at some specific issues raised through the CASP mechanism over time.

5.1. INVESTMENT IN PRIVATE SECTOR DEVELOPMENT

According to the ODAMoz web site, which lists donor funded projects in Mozambique, over 10 billion dollars has been projected for spending on projects with private sector relevance between 2001 and 2015 (see Figure 5, below).

FIGURE 5: PRIVATE-SECTOR RELATED DONOR-FUNDED PROJECT PROJECTED SPENDING 2001-2015 (MILLION DOLLARS)



While some of these funds will have taken the form of grants, others will have taken the form of soft loans which Mozambique will be required to pay back. Critical questions therefore include whether the level of business environment reform and subsequent private sector development achieved since 1996 has been value for money, and whether the reforms undertaken will result in a sufficiently healthy private sector capable of creating enough wealth to enable the government to pay back the money borrowed to invest in the development of the private sector.

For those involved in private sector development and business environment reform, this reality is necessarily disappointing and demotivating. They see that the environment has undoubtedly improved somewhat since 1996, but also the opportunity cost of not having committed then to the levels of reform envisaged. One business association representative interviewed for this report said “Yes, there has been some improvement, but really is this the best that we can do? Is it really acceptable that after 18 years this is all we have achieved?”

5.2. EMAN IMPLEMENTATION

As noted above, EMAN was the central strategy for business environment improvement between 2008 and 2012. The strategy was evaluated in mid-2012, and this section draws heavily on that document. EMAN was to be implemented by 13 institutions, mostly Ministries and regulatory agencies. The private sector, represented by CTA was to be involved through quarterly monitoring meetings, of which eight had been held by July 2012, when the government reported 80 percent average completion of the EMAN indicators.

In the case of EMAN, it takes political will for things to really happen. Those are things on paper. There is need for more advocacy and slightly less policy analysis. – BEE Interviewee 7

This claim considers the strategy’s implementation through the lens of activities undertaken, but does not consider the impact of these activities. The international evaluators found that “no impact objectives or measures were defined at any moment during implementation.” They further advised that “much better specification of what was meant by achieving a result, accomplishing an indicator and what was the potential impact should have been made. No baseline situation was described either, so for some activities it is difficult to understand what was there before EMAN started and what was accomplished during the EMAN period of implementation.”

The evaluators found that commitment to implementation of the strategy varied greatly across institutions: “For some it was priority of the institution (Single Window Trade Management System, ISPC tax, etc.), while for others it was a very marginal activity or even not accepted in its intended real result (Short-sea-shipping, airline competition, microenterprise free registry, low cost financing with donated funds or credits from the State, etc.)” They noted that “while some [implementing agencies] complained as to staffing issues, most said that the major hurdles had been rather lack of political will or consensus on whether certain measures should even be implemented (microenterprise free registry, airline and shipping liberalization, etc.) rather than simply ‘studied’.”

In terms of results achieved: “Interviews indicate that the simplified registration is certainly an achievement, that the elimination of the minimum capital and compulsory deposit at a bank is useful for very small enterprises, that the BAUs are starting to have more competences and act less as a “mailbox” for the institutions, that the ISPC has helped many come out of informality, that VAT reimbursement is slightly faster, that energy has improved a little in recent times, and a few other impacts.”

“On the other hand, property registration, common licenses, inspections, cost and still the unreliability of electricity, very high transport costs by sea and air (land is not included in EMAN), not the lack of finance but the cost of finance is prohibitive, lack of transparency of most public institutions and perceived corruption, complicated and high enterprise tax rates, and several others, remain as before thus leading to the assessment that EMAN did not perform as well as it was expected in 2008 (...) There is still a lot of work to do until both public and private sector effectively use the legal instruments created as a result of EMAN.”

This is confirmed by the President of the CTA, who indicated at the CASP 2013 that SME still face the following key challenges:

- High cost of and difficult access to financing;
- Limited access to public procurement; and
- High transaction and production costs.

Yet the very nature of the State makes holding the government to account difficult. OECD explains: Agreements with the State are inherently uncertain because “There is no third party to oblige the state to keep its promises, and the transaction’s validity depends entirely on the state’s ability to respect its commitments and to exercise self-discipline. In other words, whatever the quality of PPD may be at any given moment, the private sector remains exposed to the risk of the state behaving inconsistently over time (...) This is due to the nature of the state – no stakeholder can force it to keep its promises, or guarantee that they will be kept.” [OECD, 2007]

Let us now look at some specific areas of concern in four areas identified as recurring factors in public-private dialogue (see section 5 above): trade and investment, infrastructure and services, government and governance, and legal.

5.3. TRADE AND INVESTMENT RELATED FACTORS

TAX AND CUSTOMS

The complex and burdensome tax system has been an issue raised through the CASP mechanism consistently over time:

- The tax system is complex heavy with many exemptions, the tax base is reduced, there is corruption and disincentives (1996);
- Fiscal policy discourages investment, production and job creation, too complex, high rates, resulting in tax evasion (2001-2007);
- Revision of the tax code (2007-2012);
- Reviewed and approved the Fiscal Benefits Code and its rules (2010-11);
- VAT in agriculture inputs (2006-2013);
- Exemption from customs duties and tax charges on fuel for the fishing industry (2012-2013);
- Reduction of the VAT rate (2007-2011).

Two target results in EMAN - #2.1 Simple and not burdensome fiscal system, and #5.3 Promote a culture of paying taxes – attempted to address these issues, but little progress was made. The EMAN evaluation provides the following assessment: “[among] MF (Ministry of Finance)-coordinated activities, the stronger results seem to be in the introduction and registration of 100,000 new small contributors of the new tax regime ISPC, certain simplification of the normal tax regime, of the import-export procedures and letters of credit, the promising start of the Single Electronic Window for Trade (“Janela Única”) for imports in several pilot locations, and in the set-up of the first free trade zones by the agency created for that purpose- GAZEDA. Less strong results are in the improvement of VAT reimbursement, which is far from the legal commitment of reimbursement within 30 days; in the inexistence yet of dedicated fiscal sections in the courts (which is theoretically more the responsibility of Ministry of Justice) and the still too complex tax code.”

The formal business base remains small. While the government’s drive to increase its revenue is laudable, it is in fact resulting in rising costs to business. Examples include increases in municipal levies which are applied in addition to standard taxation, scanner and JaU (Janela Única – Single Window Trade Management System) fees, road usage tariffs, and increases in sectoral licensing fees (land, forestry & wildlife, environment). Rather than a focus on broadening the business

base and increasing the number of taxpayers (both businesses and employed individuals), the focus appears to be on maximising revenue from the existing tax base. Fees and levies are applied sectorally or dependent on geographical location (in the case of municipalities) rather than taking an integrated approach and considering the overall cost to business of the combined volume of taxes, fees and levies.

On the other hand there are numerous incentives to or causes of businesses remaining informal and thus not contributing to the tax base. The following is an extract from a study on Formalization & Business Development in Mozambique (Krause et al, 2010):

“Enterprises with higher levels of formality are checked more frequently than those with lower levels of formality. Hence those enterprises that have room for manoeuvre in choosing their level of formality, and that anticipate the costs of formality, have an incentive to stay informal in order to avoid or reduce not only the costs of compliance with regulations but also the costs of inspections. As far as further barriers are concerned, our finding that formality and owner level of education are associated supports the view that poor education constitutes a barrier to formalisation (due to the greater difficulty involved in complying with the in part complex registration, licensing and taxation procedures). This problem is exacerbated by a lack of easily understandable and consistent information on the formal requirements businesses have to comply with, depending on their branch of business, size, location etc. Finally, we found evidence that enterprises with very low and irregular cash flows have difficulties in bearing the costs of formality”.

An estimated 75 percent of the economically active population is in the informal sector. The importance of creating formal-sector jobs, formalising informal businesses and allowing space for the development of new formal businesses, in order to expand the tax base, is clear. Formal businesses are likely to create better quality jobs, pay higher salaries than those in the informal sector and thus contribute more effectively to poverty reduction and human development.

What happened since then was small and slight changes that do not make life easy for a trader yet. There was some progress at the level of taxes for example, but overall we are very far from making reforms. – BEE Interviewee 5

At the end of the day what the entrepreneur has to pay as taxes probably reach 50 percent of their income; it is high. – BEE Interviewee 2

5.4. GOVERNMENT AND GOVERNANCE RELATED FACTORS

In 2002, Booz Allen Hamilton performed an assessment on corruption and red tape in Mozambique commissioned by USAID⁸ which noted that “the country has shown disturbing signs of dysfunction in day-to-day government processes and alarming indications of corruption at all levels of government.”

The ‘cancer’ which consumes private sector development in this country is called ‘bureaucracy’ – David Ankers, Hotel Polana, 1996

RED TAPE AND PETTY CORRUPTION

Administrative requirements that are arbitrary, inconsistent, or influenced by personal connections increase the cost of doing business and create uncertainty that reduces confidence in the business environment. They also create opportunities and cover for systemic petty corruption.

It is to government we look to give priority to reforming outdated legislation and processes, to create an administration which is results oriented, not procedures oriented, to producing consolidated and simplified measures to replace the existing layers of regulation and bureaucracy – Bernard Everett, UK High Commissioner, 1997

⁸ Booz Allen Hamilton, Assessment of Corruption and Red Tape as Barriers to Trade and Investment in Mozambique, commissioned by USAID, 2002.

Yet despite long-standing commitments from the government to administrative reform, excessive bureaucracy, and accompanying rent-seeking, continues to plague Mozambican businesses. The following is an extract from the Booz Allen Hamilton report:

“In 1996, Mozambique embarked on an effort to reduce administrative barriers to investment. In the following four years, the Government of Mozambique instituted a series of laws and decrees regarding business activities in general and licensing and taxation in particular.

We intend to transform the public sector from a centralized bureaucratic institution into an efficient and innovative player which will encourage and support private initiative. The decentralization and removal of administrative barriers is crucial to our plans and strategy for socio-economic development. – Pascoal Mocumbi, Prime Minister, 1997

In 2001 (...) the International Finance Corporation’s Facility for Investment Climate Advisory Services (FIAS) reviewed the implementation and effect of the 1996 regulatory scheme. Its report ⁹ (...) concluded that, while there had been progress since 1996, reforms were insufficient and, more seriously, key reforms had not been actually adopted and implemented (...) the report made clear that the GOM had fallen far short of its overall goals of facilitating investment and conforming Mozambique’s systems to international practices...

It highlighted “political will” as a prerequisite to further action, suggested a general strategy to address these concerns, and outlined specific objectives and a staged plan of action for additional reform in eight areas (access to land, import procedures, employment of expatriates, labor, industrial licensing, tourism licensing, business registration, and inspection). (...)

The question of complexity also prevails; an ordinary citizen can not process certain documentation or have access to land, or have access to a license if they do not have relations with some people connected to the government. – BEE Interviewee 2

Despite efforts to identify problems and initiate corrective efforts, there has been little actual progress in resolving even the main issues, a fact which may indicate weak capacity and/or insufficient political commitment.”

Corruption is much more complex today than it was 10-15 years ago because today there is an installed culture of petty corruption. There is the high level and the low level (petty) corruption. Now the low level corruption is, in my opinion, much more complicated and difficult to fight (...) this to me is the “cancer” regardless of having laws or making reforms, because this is a cancer-type corruption that gradually eats up society. It is an invisible disease. For me this is the fundamental issue. – BEE Interviewee 3

Key informants interviewed for that report noted that (in 2002):

- Administrative rules and procedures were not perfect, but they had improved since the post-1996 reforms;
- Red tape and attendant petty corruption continued to impede business activity;
- Problems due to flawed and corrupt implementation were considered greater than those presented by the requirements themselves.

At that time, interviewees considered import processing and employment of expatriates as priority areas for improvements in the implementation and enforcement of legislation. These two issues were still appearing in the CASP matrices until 2010 and 2007, respectively:

- Review customs and border processes (2004-2010);
- Border services, especially Ressano Garcia [border with South Africa] (2004-2009);
- Foreign employment (2003-2007).

⁹ FIAS, “Mozambique: Continuing to Remove Administrative Barriers to Investment”, 2001.

As were more general issues related to red tape:

- Improve licencing system (2003-2010);
- Simplify registration and licensing of businesses (2003-2007, 2012-2013);
- Reform the public sector to reduce bureaucracy and promote good conduct and governance (2003);
- Excessive bureaucracy and lack of knowledge at service centers among the various ministries (2004-2006);
- Review Commercial Licencing Regulations (2009);
- Simplify procedures for assigning NUTTs [tax identification numbers] (2010);
- Single Electronic Window (2010-2011).

The licensing process today is quite easier; it is said that in 24 hours one can get a license issued, but if someone really wants to get a license to open a company, they will not get it in 24 hours. There are a number of things that do not allow for that to happen. So what does this mean? It means that the process is apparently eased. The BaU makes the process much easier, but when you go there, the people who are working there are not prepared to give you information to make it easier. – BEE Interviewee 6

The EMAN evaluation, conducted a decade later in 2012, identifies two areas of progress in this area between 2008 and 2012: “the simplified licensing, the strengthening of the BAUs (one-stop-shops) and their increasing effectiveness in resolving directly the procedures, are the stronger activities.” But the private sector does not wholly concur (see box, above). While simplified licensing appears to be a significant change on paper, and reportedly is implemented as such in Maputo, in some provinces the same complex procedures, delays, bureaucratic obstruction and corruption continue.

The recurring themes remain political will and implementation. The EMAN evaluation continues: “Weaker results are related to the harmonization of the company inspections, in spite of the creation of an agency- INAE; the competition law which is not yet approved by the AR (although it is approved by the CM); and the Centre for Business Information (CIN) which is still under creation.”

The Booz Allen Hamilton report provides a possible explanation: “If the situation in Mozambique follows the common pattern, and petty corruption associated with red tape is simply a link in a corrupt chain connecting officials at all levels, both the heads of agencies and lower-level civil servants will be averse to collaborating in an effort which seeks to identify and correct specific conditions and is publicized to a broad audience.”

GRAND CORRUPTION

The Booz Allen Hamilton report explains: “When grand corruption becomes apparent, it is already entrenched and protected throughout by those forming its net, and the potential rewards and penalties have escalated. Corruption, having in effect become part of or entirely taken over the system, is beyond proof or quantification. It has destroyed the accountability controls of the state, and those who could bear witness have too much at stake to take part in the remedy.”

It continues: “Although perception does not always square with reality, many factors point to widespread grand corruption in Mozambique. (...) Current research clearly identifies widespread corruption not as a happenstance but as a systemic consequence of policy decisions taken by the central authority. Consequently, more so than in any other areas of reform, the issue of political will from the highest level is crucial in any initiative to address the problem of corruption, as such initiatives go against the very core of the system that has been established with its interlocking networks of interests and political ties.” The report estimates that, at that time, corruption in Mozambique had reduced foreign direct investment by 50 percent.

5.5. LEGAL FACTORS

The genuine entrenchment of the rule of law and its institutionalisation (more than simply institutional structures) are the keys to a successful dialogue and the creation of a climate of trust between state and business sector. (OECD 2007)

The EMAN evaluation provides the following assessment of progress in legal issues: “MJ (Ministry of Justice)-coordinated activities, no activities can be really considered strong, but the creation of commercial sections of courts and the creation of the Centre for Arbitration, Conciliation and Mediation (CACM) of Maputo – even if it presently has sustainability problems- has had some results and preliminary impact. Weaker activities are the Insolvency Law (still under processing), the property registry (no real improvements or new Law yet), no Microenterprise registry (no consensus on how to proceed and what model to follow or how to finance the mass registration of informal microenterprises).”

Another recent activity was the approval of the Ethics Code by Parliament, which is now, renamed the Public Probity Law. This law, which was passed in May 2012, contains important conflict of interest and declaration of assets provisions that are important for fighting corruption. Some Members of Parliament who were simultaneously presidents of boards of directors and officers of public companies or subsidiaries by the state were forced to leave one of the places as a result of law enforcement. Officials from the Ministry of Civil Service were pioneers in the election of a Commission for Public Ethics also under the fulfillment of the Public Probity Law.

6. KEY CHALLENGES

Dialogue is not an end in itself: it may help to improve the quality of government policy making, but its continuance depends on the real changes brought about by the policies adopted. – OECD, 2007

A book published by the OECD on Public Private dialogue in developing countries¹⁰ warns that such dialogue “runs the risk of being merely a façade, either by being reduced to becoming a screen for collusion, corruption, and government capture by vested interests, or else by serving to disguise the theft of private-sector wealth by state officials who are using official power for their own purposes.”

We believe that from now on things will change with the approval of EMAN-II (Strategy for Improvement of the Business Environment) so I believe that the reforms will be quicker, as promised by the Government. Rogério Manuel, CTA President, 2013

In Mozambique, there can be no question that the depth and breadth of reform envisaged at the earliest CASP sessions has not materialised. But before considering what can be done to change this situation, we must first explore the possible reasons for the lack of progress, and place them within the current context. The OECD and the World Bank¹¹ indicate a number of potential contributing factors that typically impede reform and which seem to fit with the Mozambican reality; these are discussed below.

6.1. POLITICAL WILL

The World Bank report stresses that “the most critical factor [for business environment reform] seems to be the willingness of government to engage in dialogue and commit to the reform process. The business community will rarely turn down a genuine offer of consultation (...) But when government commitment to dialogue is less than whole-hearted, little seems possible.” In Mozambique, key stakeholders have often cited a lack of political will as a critical barrier to progress.

¹⁰ Pinaud, N. Public-Private Dialogue in Developing Countries – Opportunities and Risks, OECD Development Centre Studies, 2007.

¹¹ Hertzberg, B. and Wright, A. Competitiveness Partnerships - Building and Maintaining Public-Private Dialogue to Improve The Investment Climate. The World Bank, Policy Research Working Paper Series, no. 3683., 2004.

The CASP VII report, for example, recognized that “many changes that were suggested by the private sector were only superficially implemented, either because they were not understood properly by government or the political risk of their adoption was too high”.

If the main goal of business reform is economic growth (wealth and job creation) then Mozambican business is perhaps unfortunate that the country has experienced ongoing economic growth during this period. It may be that the government no longer sees the need for deep reform, since development is happening anyway and deep reform would likely require substantial structural downsizing of the public sector, which would be politically unpopular, given that the public sector continues to be the largest employer in the country. With ongoing economic growth and now the promise of coal and gas, there may be still less inclination to reform.

São problemas que têm a ver com questões políticas. Saem um pouco da esfera empresarial e entra para a parte política. Se por exemplo se abrir o espaço aéreo, isso põe em risco a continuação da LAM como companhia e não convêm ao governo, ao estado moçambicano ver a LAM desaparecer. E' uma companhia de bandeira. Não se pode depender de privados. Há todo um jogo de interesses pessoais e de tratamentos privilegiados, troca de favores, etc. etc. Portanto, esse tipo de reformas nunca vão avançar. – BEE Entrevistado 3

The lack of political will often reflects a resistance to change among senior politicians: “where, as happened in many [developing countries], a nationalist movement has transformed itself after independence into the sole ruling party (absorbing the state and the bureaucracy), opening up the economy will be understood as heralding a major challenge to the existing political system and as opening the door wide to political change. This is why many regimes oppose it.”(OECD, 2007)

Political will is closely related to conflicts of interest at the highest levels of government and the private sector. When the political elite that also acts, in large part, as the economic elite, powerful individuals may not find reforms in their personal interest, even if they are in the interest of the majority: “Civil society’s lack of autonomy equally affects the business sector, given its multiple links with the state apparatus. Political entrepreneurs (government leaders and top officials) can sometimes at the same time be important economic entrepreneurs and use the state apparatus to serve their industrial and commercial interests – and of course, this situation of collusion somewhat destroys the meaning of [public-private dialogue].” (OECD, 2007)

You have the issue of the economic elite that is intertwined with the political elite, wants to defend its business interests and begins to capture everything that is social organization and civil society and all the rest (...) It is very difficult for you to see; there is this whole thing of wanting to capture economic opportunities. – BEE Interviewee 4

The main barrier to improving the business environment is the conflict of interest. There is a situation where there is a collective interest that is in collision with the individual interest of someone. I want to believe that the law of public probity will positively contribute to improve this situation. – BEE Interviewee 4

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6.2. STRUCTURE AND CAPACITY WITHIN PRIVATE SECTOR ORGANISATIONS

The OECD further warns of the danger of ‘capture’ of private sector organisations by minority interests: “[public-private dialogue] very much risks being monopolised by an extremely small group of powerful lobbies that are often in control of key national resources and have a crucial influence on government policy. Dialogue will then amount to little more than a means of extracting rents, blocking reform, and maintaining the status quo. Then, far from strengthening democratic decision making, public-private dialogue is likely to increase the power of existing elites and of groups and individuals that already exercise a strong influence on government policy making.” (OECD, 2007)

Today I am conscious that if we continue with this approach for each of the sectors to list a specific problem (you may notice that problems included in our matrices are focused on very small issues that concern a certain segment of the private sector), this agenda of problems is so long that if we continue to take this approach we might still need 20, 30 or even 50 years. – BEE Interviewee 2

So we now have a smaller list. And yet they are not reforms. They are small-scale “tweaks”. – BEE Interviewee 5

In the Mozambican context, significant weaknesses are evident within the public-private consultation mechanism. The CASP matrices do not reflect a number of major constraints to business such as uncertainty arising from short or non-existent consultation on legislative changes (for example MCTA system of cargo traceability, VAT rules requiring provincial reporting, transit customs legislation, environment regulations, rules governing employment of foreigners), illegal trade, poor and costly infrastructure and corruption. Instead, analyses of CASP matrices and interviews with key players have shown that issues raised at CASPs have become increasingly specific rather than aiming at wholesale reform of the business environment. A tendency towards smaller reforms or adjustments which could provide “quick wins” is noted. While these small changes (ending the use of 25-line paper and stamps, diesel tax reductions for the agricultural sector, creation of a quality standards institute and SME development institute), if correctly implemented, may make a difference in day to day business operations, they will not stimulate large-scale job creation and economic development.

While the content of the CASP matrices could be greatly improved to better reflect the priorities of the private sector, the CASP process could also be strengthened considerably. To date, there has been a lack of transparency in how the dialogue process itself is conducted, and a lack of clarity about how CASP matrices are decided. Finally, there is little reflection on lessons learned about lack of progress or approaches used to try and promote and develop dialogue, even though a great deal of experience in this area has been accumulated and documented around the world.

Monitoring of progress against matrices is another critical issue, which President Chissano recognised in 2001: “The steps taken until now show us that, although the merit of these events [CASPs] is unquestionable, there are nevertheless lessons to be drawn, namely with respect to their breadth and format, and above all in relation to monitoring and implementation of recommendations.” Nevertheless, this is still a serious challenge. Matrices do not generally include concrete indicators, clear responsibilities, or implementation timeframes, and progress on one matrix is not followed up in the subsequent matrix. It is therefore functionally impossible to evaluate progress. In mid-2013, CTA commissioned an international consultant to develop an M&E system for the CTA overall¹², which should also have included an M&E framework for the CASP mechanism. By September, when this document was drafted, that work had not been made public.

¹² A previous USAID-funded Project, in 2008, had similar aims: USAID contract No.GS-10F-0619N, Task Order No. 656-M-00-05-00037-00, for the Mozambique Trade and Investment Project, Nathan Project No. H403-300.

6.3. PUBLIC SECTOR CAPACITY

So I feel that in this third phase CTA managed to garner respect and receive from the government side a certain political commitment that they are the valid interlocutor from the private sector. But it is just a political commitment. In practice, the reforms happen at the pace of the government. – BEE Interviewee 2

Another very significant constraint to the progress of business environment reforms is the capacity of the public sector in two areas:

- Capacity of government bodies tasked with oversight of strategies and enforcement of implementation;
- Capacity of the bureaucratic system to absorb and implement regulatory changes, especially among low- and mid-level functionaries and especially in the provinces.

[DASP] should not be in the MIC, but should be in the PM's office for instance. And it is not a matter of resources in this case. It is a matter of lack of power. The DASP has no power to do this. – BEE Interviewee 4

The World Bank recommends that responsibility for oversight of the implementation of reforms agreed through public-private dialogue rest with a government body tied to the highest levels of government, often the Prime Minister's office or the office of the President. In Mozambique's case, interviewees noted that MIC may not have the political power needed to oversee reform in other ministries and government bodies.

Private sector development will only happen if we have an efficient mediator, a facilitating government, a government willing to dialogue, a government with capable public administration and a government involved with the country's development – Oldemiro Baloi, Minister of Industry & Commerce, 1997

We are starting and so we are confronted with what are the difficulties of those who are beginning the path - Alberto Vaquina, Prime Minister, 2013

Regardless of which ministry is responsible for reforms, implementation is always a challenge. Certain reforms which CTA has called for in the name of the private sector, such as the introduction of the Janela Única, changes to the IRPS and IRPC codes, revision of the labour law and public private partnerships legislation have been poorly implemented and in some cases have added time and cost to the process of doing business. For example, reforms to the state procurement legislation have been regularly called for. As a result of the changes made, state purchasing is an area of extreme complexity in which few small businesses can engage, with large bundles of certified documents being demanded for each tender, despite many of these same documents having already been submitted to the state's procurement cadastre.



Problems related with access to state procurement tenders is another factor arising from the fragmented way in which the government as a whole operates and highlights the gap between legislation and implementation. One way for the government to assist business, given that the state continues to be a major purchaser in the economy, would be to simplify and streamline these procedures and ensure that registration on the national cadastre means that the bundle of documents submitted nationally does not need to be repeatedly submitted for each tender.

From the perspective of contract between the state and the private sector there is nothing that says that the state has the obligation to respond within a specified period of time to what the private sector puts on their agenda or their matrices (the public-private dialogue is still weak). The private sector meets several times with national directors, permanent secretaries, ministers, Prime Minister, President but those are mere gatherings for show; because when the agenda is set, there should be a specific agreement, a contract, a record, a memorandum, that is binding, that ensures the commitment based on issues presented by the private sector, the government will resolve those issues within an X period of time and eliminate from the matrix. – BEE Interviewee 2

Further, as noted above, reform often encounters resistance to change among the very functionaries tasked with implementing it, many of whom benefit from a complicated system that provides opportunity and cover for petty corruption.

6.4. PROTECTIONISM

Instead of the optimism for deep reform surrounding the early conferences, now the issues being raised at CASPs focus on restricting the business environment by legislating local content and shareholding, and protecting business based on the passport carried by the majority of shareholders. Approaches to protection range from the explicit – calling for legislated local content requirements based on nationality of company shareholders, and demands that investors cede “golden shares” to nominated local partners, to the more subtle – proposing that those companies that can afford to obtain “Made in Mozambique” certification benefit from preferential state purchasing. There is a real risk therefore that the second window of opportunity which Mozambique now faces will not result in opening up and deeper reform, but instead in retrograde steps towards protectionism. This may result from confidence that independent revenue streams from hydrocarbons will come online soon meaning that the government does not need to depend on donors or SME development for income.

6.5. STATE INTERVENTION IN THE PRIVATE SECTOR

The government often expresses frustration with levels of business engagement and development. In response to this the state itself opts to intervene in areas which would traditionally be occupied by business, such as construction and operation of grain silos and rice mills. This creates a form of unfair competition which distorts the market and further prevents business development and investment.

Alternatively the government opts for contracting business to undertake roles such as non-intrusive inspection (scanning) and the JaU in order to increase state revenue. However at the same time it passes the costs for these changes to business, where in other jurisdictions the costs would be absorbed by government out of the increased revenue generated.

As a result of the lack of progress over the last 18 years local business is still nascent and struggling to compete. The conservative and protectionist reaction of local business to the current window of opportunity is therefore a direct result of the lack of reform undertaken so far. If the reforms proposed in the first and second FIAS reports had been implemented in 1996 and 2001, local business would have had 12-18 years in which to develop to a level where it could compete both locally and regionally, and take advantage of the current natural resource boom. Government would also

Government would also have benefitted over the same period from increased revenue and likely would not therefore feel the need to intervene through its own investments resulting in unfair competition, or public-private partnerships financed by additional levies on the nascent private sector.

If one looks at changes which have taken place, in areas where business has been able to take matters into its own hands, such as tourism branding and destination marketing of Mozambique, provision of information through manuals, guidebooks, online libraries and procurement platforms these have generally been successful and provide an argument for not requiring state involvement in such activities. An effective, open business environment which gives space to business to operate will result in business innovating to solve its own problems.

7. CONCLUSIONS

This section presents the main conclusions of the report based on the above analysis. It also poses key questions this analysis has raised, and considers the role of donors in strengthening public-private dialogue for business environment reform. Finally, it sets out a number of recommendations.

7.1. MAIN TAKE-AWAYS FROM THE ANALYSIS

THE REFORM ENVISAGED IN THE MID-1990S HAS NOT MATERIALISED

In 1996, as Mozambique entered a period of peace and stability, there was a window of opportunity for major reform. The CASP reports for the years 1996-2001 show enthusiasm and optimism for genuine reform which would create a conducive business environment. However this was not acted on in a sufficiently meaningful way to remove barriers, and reading any of the quotes included here shows that comments made then could just as easily apply today. Reports show repetition of the same messages at each conference, accompanied by a notable lack of concrete action.

A SHARED VISION FOR MOZAMBIQUE'S DEVELOPMENT AND AN ACCOMPANYING OVERARCHING POLICY FOR BUSINESS ENVIRONMENT ARE LACKING

Apart from EMAN II, the focus of which has narrowed considerably compared to EMAN I, Mozambique has no broad Investment Climate Improvement or Business Competitiveness Strategy for the country. The result is that policy is developed sectorally, and is often followed by fragmented, complex, overlapping, and even contradictory regulations that are difficult for the private sector to comprehend and for the public sector to implement.

POLICY REFORM HAS NOT BEEN FOLLOWED BY IMPLEMENTATION

The analysis above has shown that there is a massive gap in Mozambique between legislating and implementing. The apparent completion of much of the legislative agenda in EMAN I but the lack of impact in the business environment on the ground illustrates this. Reform has been measured by a legislative change when, in fact, it is the quality and effect of implementation that should be monitored.

The lack of implementation has been attributed to:

- Lack of political will;
- Insufficient political power within government bodies tasked with overseeing reform;
- Resistance among functionaries who benefit from the existing system;
- Poor capacity within the public sector, especially in the provinces, to absorb regulatory changes.

REFORMS UNDERTAKEN HAVE BEEN SMALL-SCALE 'TWEAKS' RATHER THAN PARADIGM-SHIFTING, STRUCTURAL CHANGES

The CASP matrices do not reflect a number of major constraints to business. Instead, issues raised at CASPs have become increasingly specific rather than aiming at wholesale reform of the business environment. A tendency towards smaller reforms or adjustments which could provide “quick wins” is noted.

This tendency is attributed to:

- Powerful forces within the political structure whose interests would not be served by deeper reforms;
- Weaknesses in the CASP mechanism (see below);
- A need to demonstrate some successes resulting from the public-private dialogue.

A second window of opportunity for business development is opening up now with the natural resource boom taking place in Mozambique. The major question facing both business and government now is whether or not the brave steps required for a total reform are going to be taken or whether public-private dialogue is going to continue with tweaking and piecemeal changes, which often do not have a major impact, are frequently poorly implemented and may add unnecessary costs and burdens.

THE LACK OF DEVELOPMENT HAS GIVEN RISE TO PROTECTIONIST TENDENCIES THAT MAY STIFLE PRIVATE SECTOR GROWTH

There has been a recent focus in public-private dialogue and discussions within the private sector on restricting the business environment by legislating local content and shareholding, and protecting business based on the passport carried by the majority of shareholders. These risk closing the door to international investors who often bring much-needed technology-transfer and know-how that strengthens the private sector overall.

PUBLIC-PRIVATE DIALOGUE MECHANISMS HAVE NOT DELIVERED ON THEIR INITIAL PROMISE AND SHOULD BE SIGNIFICANTLY STRENGTHENED

The CASP has merits as an annual opportunity for business and government to meet and interact, and discuss relevant issues of the day. However the format tends to include an enormous range of issues, and has proven to be an inadequate lobbying tool. It has proven difficult to date to introduce concrete change based on an event which takes place more or less annually and which presents issues ranging from macro, policy level down to sector specific regulations or the conduct and professionalism of public functionaries. Even with the political will for the types of reform proposed, the format of the CASP matrices and conference is not conducive to promoting and then monitoring reform. If there is to be real negotiation and reform action in specific sectors this requires much more intense dialogue through transparent, inclusive and efficiently managed mechanisms.

There are in fact two main impediments to a functioning dialogue system, one being lack of open, inclusive, transparent and systematic dialogue between government and business and the second being the lack of the same within the private sector itself. Eighteen years ago the private sector was a smaller, more homogenous group. Despite the fact that most formal businesses today, regardless of size, continue to face broadly the same issues in the business environment, the simple factor of increasing numbers means less homogeneity and a greater diversity of views which should be solicited and heard. Those representing these different groups should begin to determine the most effective mechanism for business to talk amongst itself, and to government.

7.2. CONCLUSION

In some ways Mozambique has come full circle. After failing to capitalise on the first window of opportunity in 1995-1996 the country has another chance, as a result of hydrocarbon discoveries. Assuming that the nation's goal is wealth and job creation, then the critical question is how best to take advantage of this new window of opportunity to ensure inclusive development based on a strong and healthy private sector. This question applies to all sectors of government, not only those traditionally associated with business, since economic development is intrinsically linked to all other forms of development and should not be seen in isolation.

The foregoing demonstrates that there are structural problems in respect of policy, legislation and the business environment. It further demonstrates that the type of ad hoc, uncoordinated reform which has taken place so far does not have the results required to enable the local business sector to develop in line with the national and regional opportunities available to it.

There is a need to focus at macro level on a radical policy shift based on strong political will and leadership, and then cascading from that the type of regulatory and public sector reform needed to sweep away bureaucracy and corruption, move from state control to state oversight and facilitation. This is the proposition made in 1996 and it remains equally valid and necessary in 2013.

The lack of an overarching investment climate and business competitiveness strategy has serious repercussions for the business environment and constrains the private sector's ability to drive growth and create jobs. A policy framework aiming to create a favourable environment for business, would take into account both sectoral needs (for example in agriculture and tourism) and general business needs such as exchange rate policy dictated by goals such as import substitution combined with fiscal and labour policies structured towards employment creation through industrial and agricultural development.

As a result of the lack of development there is now increasing pressure to revert to protectionist policies. The question is, who will be protected and who will benefit from this type of approach? Experiences in other jurisdictions suggest that it is unlikely to be those who are most in need of economic development.

The report's authors therefore believe that the opposite approach should be taken. There should be a paradigm shift in which every action undertaken by every government functionary touching the private sector should be analysed in terms of its benefit to business, and particularly to SMEs. It is only when this philosophical shift takes place that the existing barriers will begin to be eliminated in such a way that formal companies can develop and grow and thus fulfil their role in providing jobs and tax revenue. Strong will and commitment is needed at senior levels of government to ensure that every piece of new and existing legislation and policy, every implementation action and every behaviour is assessed and revised to support SMEs and the broader private sector.

Resolving key aspects such as infrastructure and cost of factors should be determinants of business development policy. Questions about why the issues noted above exist and how they interact should be asked and answered as honestly as possible. For example to what extent do the problems with the functioning of the judicial system in fact impact on access to finance? How do lack of information and a culture of not sharing information and of arbitrary implementation of legislation contribute to lack of investment? To what extent are levels of bureaucracy and delays in public sector decision-making attributable to ongoing centralization and what is the true cost to business of such delays?

7.3. KEY QUESTIONS ARISING

The foregoing analysis raises a number of questions which should be answered or researched in order to develop a more detailed understanding of the social, political and economic reasons for and impacts of lack of business environment reform over the past 18 years. It is only by understanding why major reform has not taken place that business, government and society as a whole can determine what needs to be done and whether in fact there is will for the type of deep structural reform that is proposed here.

Questions related to perceptions of business reform and achievements, and to political will:

- Do CTA and the government agree with the view that progress has been limited, and if so to what do they attribute this?
- Does the government genuinely believe that it has reformed the business environment and if so to what does it attribute the consequent lack of progress in terms of economic development?
- What is the government's policy going forwards? Is it prepared to genuinely commit to deep reform? If it is not, what is the position, role and relevance of business and its representative bodies?
- What is the opportunity cost to Mozambique as a whole of not reforming the business environment?
- What is required for genuine, far-reaching reform to be achieved? What should be the goal of this reform?

Questions related to public-private dialogue processes:

- How are issues selected for inclusion on CASP matrices? How are they framed given that they appear to range from very general to very specific? What analysis is undertaken to understand the underlying causes of each issue and how it interrelates with other issues, before proposing what should be done to reform them?
- Do the matrices reflect the real concerns of business?
- Have issues which are no longer included in the matrices in fact been resolved? Are they recurring? If they have not been resolved why have they been dropped from the matrices?
- How is progress measured? How can traceability of issues and comparability of data be better ensured? If reforms have taken place what has been the impact of these – in some cases it seems that the following year similar issues reappear with an indication that the reform was not adequate.
- Is it possible to achieve the level of reform needed by focusing on specific reform tasks and “tweaking” the business environment or is more required?

7.4. THE ROLE OF DONORS

Each CASP is estimated to have cost in the region of 200,000 dollars (2,600,000 dollars for the 13 conferences), the majority of which has been funded by international donors. Can this be considered as reasonable value for money, given the lack of progress and the current state of the business environment? And what, beyond direct funding for the dialogue itself, should be the role of donors in improving the impact of public-private dialogue on the business environment?

The OECD report identifies some key areas where donor support can be of great value:

Material, analytical and procedural support. Donors “can advise participants on procedural and organisational aspects of the consultation process (e.g. frequency, number of participants, defining the agenda, conduct of discussions and publication of minutes). They can also provide material and analytical support to the secretariat co-ordinating the dialogue process.”

Reduction of “transaction costs”. “Donors can be guarantors of the dialogue process, ensuring its transparency and, especially, its follow-up. Supporting the co-ordinating secretariat is a key role. ‘A secretariat may provide an objective information-collection and analytic capacity (...) And the ability to collect information may help monitor the extent of compliance with CM [consultative mechanism] decisions by participants’ (World Bank, 2001, p. 5). The follow-up and monitoring of commitments made during the dialogue is vital to its credibility, and so it is essential to have a secretariat that is financially and analytically independent – and this can be guaranteed by donors.”

7.5. RECOMMENDATIONS

The following assumptions guide the recommendations arising from this report:

- That there is a political will for change, and for economic development, and that this political will would be manifested from the highest levels of government;
- That no reform which, even as a temporary measure, reduces overall national fiscal income, can be contemplated at this point in the country’s development.

Many recommendations could be made in respect of existing mechanisms for dialogue, and proposals for reform of the business environment. However as the foregoing demonstrates the issues are well-known. What is required is a completely fresh approach to addressing them.

We believe that there should be one guiding principle or common goal: Economic development for inclusive job and wealth creation.

Therefore rather than presenting a long list of recommendations aimed at “tweaking” the status quo, we have instead opted for four recommendations which would have a radical effect on the business environment and thus on economic and human development:

- Policy – there should be one, overarching economic development policy, led from the highest levels of government, as a result of which every thought, action, regulation, levy, fee etc. should be analysed based on its benefit to business, and structured accordingly;
- Legislation – legislation should in all cases reflect faithfully the related policy. It should be clear, simple and overall implementable. To improve the quality and relevance of legislation, the draft Public Participation Law (Lei de Participação Pública) should be approved and implemented immediately to not only ensure broader access to debate on legislation and policy for the private sector but for civil society as a whole;
- Implementation – Ministers should be directly accountable to the Prime Minister or the President for the effective and timely implementation of policy decisions and associated regulation for which they are responsible. Communication and dissemination of new regulations – to the private sector, common citizens, and especially functionaries tasked with legislative oversight and implementation – should be prioritised;
- Impact – progress and achievements should be monitored and assessed on the basis of impact, measured in terms of the experience of the majority of firms, rather than the completion of activities.