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SERA POLICY PROJECT
YEAR 5 QUARTER 2 REPORT

TANZANIA ENABLING POLICY ENVIRONMENT FOR AGRICULTURAL SECTOR GROWTH

JANUARY 1, 2016 – MARCH 31, 2016

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SERA POLICY PROJECT
YEAR 5 QUARTER 2 REPORT

Contract No. 621-C-00-11-00003-00
USAID Feed the Future SERA Policy Project
Tanzania Enabling Policy Environment for Agricultural Sector Growth

Implemented by Booz Allen Hamilton

TABLE OF CONTENTS

ABBREVIATIONS AND ACRONYMS iii

EXECUTIVE SUMMARY 1

INTRODUCTION 4

OVERVIEW 5

IMPLEMENTATION PROGRESS - MAINLAND 5

COMPONENT I: POLICY RESEARCH AND REFORM 5

1. Intermediate Result 2: Binding Constraints to Private Sector Investment Reduced 6

2. Intermediate Result 2.2: Agricultural Productivity and Profitability Increased in Targeted Value Chains 9

COMPONENT II: INDIVIDUAL AND INSTITUTIONAL CAPACITY BUILDING 12

COMPONENT III: ADVOCACY AND COMMUNICATIONS 16

IMPLEMENTATION PROGRESS - ZANZIBAR 19

1. Intermediate Result 2: Binding Constraints to Private Sector Investment Reduced 19

PROJECT MANAGEMENT AND PERFORMANCE 19

PROBLEMS / CHALLENGES 20

CROSS-CUTTING ISSUES 20

FINANCIAL SUMMARY 22

PERFORMANCE MANAGEMENT PLAN 23

Table 1. USAID Standard Indicator and Required if Applicable Indicator Targets for Life of Contract 23

Table 2. Project/Custom Level Indicator Targets for Life of Contract 24

ANNEXES A1-1

Annex 1. Trip Report – Agriculture Business Environment, Mozambique Study Tour A1-1

Annex 2. Draft Report –Gender and Maize Productivity and Marketing in Tanzania A2-1

Annex 3. Trip Report – National Investment Policy and Investment Act Technical Workshop A3-1

Annex 4. Training Material – Basic Economic Principles for FBM Training, Zanzibar A4-1

Annex 5. Policy Brief – Food Basket Costs in Tanzania A5-1

Annex 6. Programme and Presentations – Agricultural Policy Conference A6-1

Annex 7. Trip Report – Food Basket Analysis A7-1

Annex 8. Trip Report – Food Demand Study A8-1

ABBREVIATIONS AND ACRONYMS

ANSAF	Agriculture Non-State Actors Forum
BOT	Bank of Tanzania
CEO	Chief Executive Officer
CI	Custom Indicator
COP	Chief of Party
DAEA	Department of Agricultural Economics and Agribusiness
DFSN	Department of Food Security and Nutrition
DPP	Department of Policy and Planning
ERS	Economic Research Service
FBM	Food Basket Methodology
FtF	Feed the Future
GDP	Gross Domestic Product
GOT	Government of the United Republic of Tanzania
HEA	Household Economic Approach
iAGRI	USAID Feed the Future Research and Education Project
IFC	International Finance Corporation
IR	Intermediate Result
MAFC	Ministry of Agriculture, Food Security and Cooperatives
MALF	Ministry of Agriculture, Livestock and Fisheries
MIU	Market Intelligence Unit
MLHHSD	Ministry of Lands, Housing and Human Settlements Development
MSU	Michigan State University
NA	Not applicable
NAFAKA	USAID Feed the Future Staples Value Chain Project
NFRA	National Food Reserve Agency
NFSD	National Food Security Department
PAC	Policy Action Committee
PAG	Policy Agricultural Group
PAPAC	Platform for Agricultural Policy Analysis and Coordination
PDB	President's Delivery Bureau
PMO	Prime Minister's Office
PRU	Policy Research Unit
PS	Permanent Secretary
RCT	Rice Council of Tanzania
RGoZ	Revolutionary Government of Zanzibar
SAGCOT	Southern Agricultural Growth Corridor of Tanzania
SERA	USAID Feed the Future Policy Project

SME	Small Medium Enterprise
SUA	Sokoine University
TASTA	Tanzania Seed Trade Association
TBD	To be determined
TIC	Tanzania Investment Centre
TNS	Taylor Nelson Sofres
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
USG	United States Government
WB	World Bank

EXECUTIVE SUMMARY

The Tanzania SERA Policy Project (SERA) of the United States Agency for International Development (USAID) Feed the Future (FtF) Initiative is implemented by Booz Allen Hamilton. The SERA Project is focused on improving the policy environment for agriculture, and developing individual and institutional capacity to undertake policy analysis and advocate effectively for policy reforms. SERA began in April 2011, and completed the fourth full year of operation on September 30, 2015. This Quarterly Report, Quarter 2 (Q2) of Project Year 5 (Y5), covers the period from January 1, 2016 to March 31, 2016. SERA Project's period of performance was originally set to end on April 7, 2016. However, a request for a no-cost extension has been approved by USAID which extends the period of performance through August 30, 2016. The SERA Chief-of-Party (COP), Marialyce Mutchler, was on leave during Q2 and the Senior Advisor, Don Mitchell, was the Interim Chief-of-Party and was resident in Tanzania from January 9 to March 12. The Ministry of Agriculture, Food Security and Cooperatives (MAFC) was reorganized in Q1 and the Ministries of Agriculture, Livestock and Fisheries were combined into a single ministry called the Ministry of Agriculture, Livestock and Fisheries (MALF). This Quarterly Report will refer to the reorganized Ministry and distinguish between activities undertaken with MAFC and MALF.

The following activities were completed during Q2:

- The study tour to Mozambique for the Agriculture Business Environment Study was undertaken from January 17-23.
- The draft Maize Gender Report was completed on January 31 and additional data analysis was requested of Taylor Nelson Sofres (TNS).
- Don Mitchell attended the USAID Partner's Meeting in Morogoro from February 8-10.
- Alex Mkindi participated in a workshop in Dodoma from February 15-19 on Agricultural Investment Incentives and the Agricultural Business Environment.
- Nancy Cochrane from the United States Department of Agriculture (USDA) delivered training on the construction of a Healthy Food Basket to staff of the Department of Food Security and Nutrition in Zanzibar during February 16-18 and was assisted by Aneth Kayombo of SERA.
- Don Mitchell conducted training on Economic Principles for Food Basket Methodology (FBM) in Zanzibar on February 18.
- Nancy Cochran and Aneth Kayombo met with the Department of Food Security of MALF on February 22 to discuss piloting the FBM in four districts and introduced the concept of a Healthy Food Basket.
- The Food Basket Costs Policy Brief was launched at a workshop on February 19 by Don Mitchell, and Nancy Cochran made a presentation on the Healthy Food Basket.
- The No-Cost Extension Modification Proposal was submitted on February 25.
- Presentations and Chairing of Session at the Agriculture Policy Conference February 23-25 included:
    - Policy Options for Food Security by Don Mitchell

    - Agriculture Business Environment and Incentives by Don Mitchell
    - Land Compensation and Valuation Schemes by Don Mitchell
    - Secured Transactions/Collateral Registry by Dale Furnish
    - Chairing of Session on Inputs by Alex Mkindi
- Don Mitchell and Dale Furnish met with the Bank of Tanzania (BOT) staff to discuss the Secured Transactions/Collateral Registry activity on February 26.
- Professor Chen Zhen from the University of Georgia traveled to Tanzania to work with Edith Lazaro of SERA on the Food Demand Study from March 7-12.

The Mozambique study tour for the Agriculture Business Environment and Incentives study was conducted from January 17-23 and led by Don Mitchell. The team included James Ngwira from the President's Delivery Bureau (PDB) and Martin Marsalu from the Tanzania Investment Center (TIC) as well Edith Lazaro of SERA. A local facilitator (Calisto Bias) was hired to arrange meetings and translate as necessary. The trip was very successful and provided the information needed to compare the agriculture business environment of Mozambique with that of Tanzania. The trip report (Annex 1) was circulated to the study team for comments and then revised and sent to the manager in each of the participating organizations.

Don Mitchell attended the USAID Partner's Meeting from February 8-10 in Morogoro and renewed contacts with Feed the Future implementing partners and others involved with the USAID Economic Growth Agenda. Of particular note were discussions with David Kraybill and Isaac Minde of the iAGRI project, Geoffrey Kirenga and Jennifer Baarnes of Southern Agricultural Growth Corridor of Tanzania (SAGCOT), Julie Harrison from Michigan State University (MSU), Tom Carr of the NAFAKA, and the team from Dalbert that is providing support for SAGCOT Centre. Jennifer Baarnes, deputy Chief Executive Officer (CEO) of the SAGCOT Centre, was briefed on the status of the Agriculture Business Environment study and was provided with a preliminary draft of the PowerPoint to be delivered at the Agriculture Policy Conference. Geoffrey Kirenga, CEO of the SAGCOT Centre, delivered a presentation on the challenges faced by SAGCOT in attracting investors and said that SAGCOT has only delivered one land title of eight hectares (to Unilever for a new tea factory) in the entire five years that SAGCOT Centre has operated. Tom Carr, COP of NAFAKA, expressed interest in meeting to discuss SERA policy activities and was especially interested in our maize gender study. The Dalbert Group requested a meeting to compare our work on policy with their support of SAGCOT Centre. Julie Harrison of Michigan State University, who is involved in a review of SAGCOT, was very interested in SERA's views of SAGCOT's successes that were reported by Geoffrey Kiringa.

The draft Maize Gender Report (Annex 2) was completed and circulated to our World Bank (WB)/International Finance Corporation (IFC) collaborators for comments and to SERA staff and selected others. It was also sent to TNS consultants for data corrections and completions.

Alex Mkindi traveled to Dodoma to participate in a workshop on the business environment and incentives for agricultural investors from February 15-20. The trip report is attached (Annex 3).

Training on basic economic principles needed for analysis of food security and implementation of the FBM (Annex 4) was provided to the Department of Food Security and Nutrition in Zanzibar on February 18 by Don Mitchell. The three-hour training covered the basics of demand, supply, price determination, inflation, exchange rates, import dependence, gross domestic product (GDP), and monitoring of regional and global food markets and food prices. The training was well received and should have improved the team's ability to understand economic principles needed to implement the Food Basket Methodology.

The Food Basket Costs Policy Brief (Annex 5) was launched in Dar es Salaam on February 19 at a half-day workshop at the Protea Courtyard Hotel to about 20 people from various organizations. The Ministry of Agriculture, Livestock and Fisheries was represented by Caroline Kilembe from the Department of Food Security and she is emerging as a strong supporter of the Food Basket Methodology. She will feature strongly in our future efforts to anchor the Methodology in the MALF. Nancy Cochrane presented her work (done in collaboration with SERA) on the development of a Healthy Food Basket. Nancy plans to return in April to continue work on the FBM and Healthy Food Basket with the MALF.

The 2nd Annual Agricultural Policy Conference was held during February 23-25 at the Serena Hotel in Dar es Salaam. SERA provided financial support for the conference, assisted in the planning of the conference, and was very visible by contributing to four presentations and chairing one session. The conference brought together key decision makers, including the Deputy Minister of Agriculture, the Permanent Secretary (PS) of Food Security in MALF, a member of parliament who is on the agriculture committee, the CEO of SAGCOT, and elder statesmen including Peniel Lyimo a former PS in both the Prime Minister's Office (PMO) and MAFC. The new PS of the MALF requested that the presentations and reports be sent to him. Don Mitchell presented the Policy Options for Food Security which was updated from an earlier version with new material on Food Basket Costs and the Business Environment. Don Mitchell also presented the draft of an Agriculture Business Environment Study that showed that Tanzania is not competitive on taxes, fees, and operating costs compared to Mozambique and Zambia, and that access to land is the single most important constraint to attracting large investors into the agricultural sector. The results make it easier to understand why SAGCOT has not been successful in attracting foreign investors into the sector. Conference participants encouraged SERA to try and use the results to lobby the Government of Tanzania (GOT) to improve Tanzanian competitiveness in corporate agriculture. Don Mitchell also made a presentation on Land Compensation Schemes and Valuation Models from the study completed by Landesa for SERA. Professor Dale Furnish, the SERA consultant working on Secured Transactions/Collateral Registry made a presentation showing how the Secured Transactions Law needs to be changed and what the subsequent benefits of making such changes would be. Finally, Alex Mkindi chaired a session on Agricultural Inputs. The program for the conference and all PowerPoint presentations are attached as Annex 6.

Don Mitchell and Dale Furnish met with the Bank of Tanzania staff on February 26 to follow-up on the progress on the implementation of the Secured Transactions/Collateral Registry.

Augustino Hotay, the BOT lead on this activity, and Nkawna Magina, presented SERA with a work plan for fast tracking the activity and requested support for a workshop and consultants to present the activity to BOT management. We suggested they submit a formal request and advised BOT that our availability and funds to support the activity were limited by the upcoming closing of the SERA Project. No request had been received by the end of Q2.

Nancy Cochran of the Economic Research Service (ERS) of USDA visited Tanzania from February 15-26 to provide training to the Department of Food Security and Nutrition in Zanzibar on the construction of a Healthy Food Basket and to meet with the Department of Food Security of the MALF to discuss continued work on the implementation of the Food Basket Methodology. The training in Zanzibar was conducted from February 16-18 and is attached in Annex 7. The discussions with the MALF included planning of a desk study prior to conducting a pilot in four districts (Bahi, Kilosa, Masai, and Longido).

Professor Chen Zhen of the University of Georgia in Atlanta, Georgia traveled to Tanzania from March 7-12 to work with Edith Lazaro and Don Mitchell of SERA on the Tanzania Food Demand Study. Professor Zhen is an expert on the econometric estimation of food demand systems and was able to provide technical leadership and guidance on the activity and substantial progress was made on the estimation of a theoretically sound demand system. The results will be completed by July and are expected to provide a better understanding of the economic parameters of food demand and provide the basis for estimation of future demand trends. The trip report is attached as Annex 8.

The first draft of the Agriculture Business Environment and Incentives study was completed by Don Mitchell and Edith Lazaro in March 2016 and circulated to team members for review and comments. The findings from the study show that Tanzania is not competitive with Mozambique and Zambia at attracting large foreign investors into the sector. Tanzania does not offer special corporate tax incentives to agriculture while Mozambique and Zambia do, and Tanzania has significantly higher local taxes and operating costs than Mozambique or Zambia. Access to land is also a constraint to foreign investors and the Tanzania Land Act (1999) precludes the sale of a land title by a foreign investor which prevents an investor from benefiting from land value appreciation. The preliminary findings were presented at the Agricultural Policy Conference and the final report will be submitted to key stakeholders and decision makers in April.

INTRODUCTION

The Tanzania SERA Policy Project assists both the Government of the United Republic of Tanzania and the private sector to enable a broad-based, sustainable transformation of the agricultural sector through policy reform. The vision for this project is twofold: to improve the policy and regulatory environment for agricultural growth and to build a group of public sector institutions, advocacy organizations, and individuals capable of performing rigorous policy analysis and advocating for policy reform. Improving agricultural policies is accomplished by working with the GOT and other stakeholders to identify important policy constraints to growth

in the agricultural sector and by helping to alleviate these constraints through policy and regulatory reforms.

The SERA Project conducts and commissions evidence-based policy research to inform the GOT and other stakeholders of the impacts of existing policies and the potential benefits of improved policies. In addition, the SERA Project develops the capacity of individuals, institutions, and organizations to engage in policy analysis and advocate for policy change. At the conclusion of the project, we expect USAID will leave behind an improved policy environment and a legacy of enabling the GOT and other stakeholders to initiate, develop, and utilize evidence-based research in policy decisions and implementation. The SERA Project focuses its activities around priorities identified in collaboration with the Southern Agricultural Growth Corridor of Tanzania initiative.

OVERVIEW

The SERA Policy Project has three primary components: Policy Research and Reform, Capacity Building, and Advocacy and Communications. Other important activity areas include collaboration, leadership, monitoring and evaluation.

Policy Research and Reform
The SERA Project's approach to policy reform is to provide evidence-based research on important policy issues to inform GOT and other stakeholders on policy impacts and options. This has proven to be an effective method of encouraging policy debate and achieving policy reforms.

Capacity Building
The SERA Project is engaged in both institutional and individual capacity building in support of policy reform. This includes institutional evaluations and support for strategic planning as well as formal training for GOT staff. Support to individuals includes financial assistance for research on important policy issues and training for selected individuals.

Advocacy and Communications
The approach to advocacy and communication is to provide information and disseminate research findings rather than to publicly advocate for policy reform. This is consistent with our approach to policy reform which is focused on GOT counterparts for policy reform rather than grass roots organizations or other stakeholders.

IMPLEMENTATION PROGRESS - MAINLAND

COMPONENT I: POLICY RESEARCH AND REFORM

The SERA Project undertakes analysis and research on important policy issues in an effort to provide evidence-based analysis of policy impacts and provide policy options to government. Some of this research is conducted by SERA staff, and some is contracted to consultants. In all

cases, high standards are sought. Increasingly, the SERA team is invited to join policy discussions at an early stage to provide input on important policy issues and this is an effective way to influence policies in the early development stages.

1. Intermediate Result 2: Binding Constraints to Private Sector Investment Reduced

The SERA Project works to expand markets through improved trade policies, improved market performance, and increased access to credit. Trade policy is an important component of economic policy and the economic environment. The SERA Project has previously focused on two important trade policy issues: the requirement of the MAFC that traders obtain export and import permits from the GOT before undertaking trade, and the ad hoc approach of GOT to emergency food imports that can disrupt markets and are vulnerable to rent seeking. Both of these efforts are on-going. The SERA Project is also conducting research on the performance of maize and rice markets, and the impact of gender on maize marketing and production to provide deeper understanding of these issues and provide support for policy reform recommendations. The proposal for a Transparent Rules-Based System for Emergency Food Imports, first proposed by SERA to the GOT in 2012, has gained strong support within the Government and will be the main policy activity of SERA to Expand Markets and Trade during the remainder of the project. This effort will be combined with activities that support the proposed Market Intelligence Unit (MIU) in the Ministry of Agriculture, Livestock and Fisheries. Improved credit to smallholders and SMEs has been a SERA priority since inception, and the meeting with the BOT on February 26 gave new hope to the activity because a work plan was presented by BOT. However, there is also a realization that the activity cannot be completed in the time remaining due to the lack of urgency displayed by the BOT. The activity will be transitioned to other development partners.

A. Transparent and Rules-Based Import/Export Permit Policy

In Year 4, the SERA Project presented a series of recommendations and options in the Policy Options for Food Security, Agricultural Growth and Poverty Alleviation (Policy Options Paper) for the establishment of a transparent and rules-based emergency food import policy. The GOT has expressed interest in receiving support to design and implement such a policy as part of the proposed Market Intelligence Unit. SERA Project will develop draft operational guidelines and training materials to support the design and implementation of a Transparent Rules-Based System for Emergency Food Imports. The draft guidelines will be developed with key stakeholders and the training delivered to the Platform for Agricultural Policy Analysis and Coordination (PAPAC) training group. This activity will transition to PAPAC.

Policy Action Status:

- Stage 2: Stakeholder consultation/public debate.
  SERA Project presented recommendations for eliminating the permit systems in the Policy Options Paper presented to GOT at a workshop in February 2014. Since then, there has not been any progress in the status of the export permit policy. No further action has been requested or indicated by the GOT.

Tasks completed in Q2 of Y5: None.

Tasks planned for Q3 of Y5:

- Design and test a Transparent Rules-Based System for Emergency Food Imports in preparation for training of the proposed Market Intelligence Unit in the MALF.
- Conduct stakeholders' workshop on proposed transparent rules-based system for emergency food imports and exports.
- Draft and implement training on the application of the transparent rules-based system for emergency food imports and exports.

Milestones:

- Rules-based transparent system presented to GOT and other stakeholders (Q3).
- Implementation plan and capacity building action plan created (Q3).
- Capacity building provided (Q4).

Resources:

- SERA Policy Analyst
- SERA Senior Agriculture Policy Advisor
- SERA Senior Advisor
- Short term technical assistance (STTA) Economist Varun Kshirsagar.

Key Partners: MSU, MALF.

Contribute to:

- Intermediate Result (IR) 4.5.1-24 Number of agricultural and nutritional enabling environment policies completing the following process/steps of development as a result of United States Government (USG) assistance in each case: 1: Analysis -- 2: Stakeholder consultation/public debate -- 3: Drafting or revision -- 4: Approval (legislative or regulatory) -- 5: Full and effective implementation.
- Custom Indicator (CI) 4.1.1 Number of research outputs.

B. Credit to Smallholders and SMEs /Collateral Registry

Credit is essential to investments and delivering credit to small and medium enterprises (SMEs) and small farmers has been a challenge in Tanzania because of the lack of a legal framework governing lending for movable assets. Land cannot generally be used as collateral because all land is owned by the government. Moveable assets have not been used as collateral in Tanzania due to the weak legal structure and undeveloped registry to record liens against such assets. The SERA Project is working to improve this situation by supporting the Bank of Tanzania to adopt and implement a modern secured transactions/collateral registry. The SERA Project has agreed to collaborate with the World Bank on this important activity, with the World Bank providing financial support for the necessary computer equipment and software, and SERA providing policy support. Capacity to use this system will then be developed through training and capacity building activities. Progress has been limited on this activity because the Bank of Tanzania has not devoted the necessary resources to develop this activity nor accepted the support offered by SERA. A meeting was held on February 26 with the BOT and they provided a plan to fast track the activity. Unfortunately, SERA is still waiting on a proposed activity timeline from the BOT.

Policy Action Status:

- Stage 1: Analysis.
  The target policy action for Year 5 is *Stage 4, Approval (legislative or regulatory)*. In Year 3, SERA Project reported delays in attaining targets for this activity and the same delays remained in Year 4. Lack of progress on the draft, presentation, and adoption of the legislations has a direct impact on meeting *IR 4.5.2-30 Number of MSMEs including farmers, receiving USG assistance to access loans.*

Tasks completed in Q2 of Y5:

- STTA Dale Furnish presented the Secured Transaction/Collateral Registry Policy Brief at the 2nd Annual Agricultural Policy Conference February 23-25, 2016.

Tasks planned for Q3 of Y5: *Awaiting workplan from BOT*.

Milestones:

- Legislation finalized (Q2).
- Stakeholder events held in support of the Legislation (Q2).
- Legislation presented in Parliament (Q3).

Resources:

- SERA Senior Agriculture Policy Advisor
- SERA Senior Advisor
- SERA Communications and Capacity Building Specialist
- STTA Legal Expert Dale Furnish
- M&N Law Associates (Advocates).

Key Partners: BOT, WB, MSU, Agriculture Non-State Actors Forum (ANSAF).

Contribute to:

- IR 4.5.1-24 Number of agricultural and nutritional enabling environment policies completing the following process/steps of development as a result of USG assistance in each case: 1: Analysis -- 2: Stakeholder consultation/public debate -- 3: Drafting or revision -- 4: Approval (legislative or regulatory) -- 5: Full and effective implementation.
- IR 4.5.2-30 Number of MSMEs, including farmers, receiving USG assistance to access loans.

C. Improving Performance of Maize and Rice Market Prices

The SERA Project's research on maize and rice markets efficiency is comprised of two components. The first looked at the domestic and external drivers of maize prices and the report was completed in 2014. That study resulted in a Policy Brief that was disseminated in December 2014 at the 1st Annual Agricultural Policy Conference in Tanzania, and a research paper that was presented at the International Conference of Agricultural Economists in Milan, Italy in August 2015. The paper has been submitted for publication in the World Bank's Research journal. The second component of the study will look at the domestic and external drivers of rice prices using the same methodology as the maize study. The rice study will contrast its results with the findings of the maize study. It is anticipated that the rice study will result in a Policy Brief and research paper in 2016.

Policy Action Status:

- Stage 2: Stakeholder consultation/public debate.

Tasks completed in Q2 of Y5: None.

Tasks planned for Q3 of Y5:

- Complete study of domestic and external drivers of rice prices.

Milestones:

- Research results presented to stakeholders (Q3).

Resources:

- SERA Policy Analyst
- SERA Senior Advisor
- STTA Economist Varun Kshirsagar.

Key Partners: NA.

Contribute to:

- IR 4.5.1-24 Number of agricultural and nutritional enabling environment policies completing the following process/steps of development as a result of USG assistance in each case: 1: Analysis -- 2: Stakeholder consultation/public debate -- 3: Drafting or revision -- 4: Approval (legislative or regulatory) -- 5: Full and effective implementation.
- CI 4.1.1 Number of research outputs.

2. Intermediate Result 2.2: Agricultural Productivity and Profitability Increased in Targeted Value Chains

An enabling environment is essential to a competitive agricultural sector led by the private-sector. The SERA Project has had several activities designed to improve the enabling environment, including reviewing food security policies, reviewing operations of the National Food Reserve Agency (NFRA), improving land policies, and improving the business environment and incentives. The reviews of food security policies and the NFRA are complete, the analysis of the agricultural business environment and incentives is on-going, and the study of land compensation and valuation is completed and has been disseminated to stakeholders.

A. Food Security

The SERA Project is working with the GOT to develop a more comprehensive food security policy, and presented a workshop in Y4 on Policy Options for Food Security, Agricultural Growth and Poverty Alleviation. This Policy Options Paper concluded our research efforts to provide mainland Tanzania with options for a more comprehensive food security policy. The policy recommendations presented to GOT are discussed further under ***Component II: Individual and Institutional Capacity Building.***

B. Agriculture Business Environment Study

The business environment facing agriculture in Tanzania is poor and that largely accounts for the low level of foreign direct investment in the sector. A number of studies have identified factors contributing to the poor business environment and they include: an unreliable and costly power supply, poor infrastructure, lengthy and uncertain procedures for foreign investors to acquire land, and high taxes and operating costs. In response to requests from

GOT, the SERA Project began a study of the business environment for Tanzanian agriculture and a comparison with those of Mozambique and Zambia. This study is being conducted in collaboration with the staff from MALF, SAGCOT, PDB and TIC.

Policy Action Status:

- Stage 2: Stakeholder consultation/public debate.

Tasks completed in Q2 of Y5:

- Completed a study tour to Mozambique with staff from PDB and TIC.
- Presented findings to stakeholders at 2nd Annual Agricultural Policy Conference February 23-25, 2016.
- Participated in a workshop on the business environment and incentives in Dodoma from February 15-20.

Tasks planned for Q3 of Y5:

- Present report and Policy Brief to collaborators at workshop scheduled for April 20.
- Complete the report on the agriculture business environment in Tanzania.
- Disseminate final report.
- Publish a Policy Brief.

Milestones:

- Field research completed (Q1).
- Draft report delivered (Q2).
- Final report delivered (Q3).

Resources:

- SERA Research Associate
- SERA Senior Agriculture Policy Advisor
- SERA Senior Advisor.

Key Partners: SAGCOT, MALF Department of Policy and Planning (DPP), PBD, TIC.

Contribute to:

- IR 4.5.1-24 Number of agricultural and nutritional enabling environment policies completing the following process/steps of development as a result of USG assistance in each case: 1: Analysis -- 2: Stakeholder consultation/public debate -- 3: Drafting or revision -- 4: Approval (legislative or regulatory) -- 5: Full and effective implementation.
- CI 4.1.1 Number of research outputs.

C. Land Policy - *Completed*

Land policy is very controversial in Tanzania amid concerns that investors will grab land and displace those with informal or insecure land rights. The SERA Project was invited by the Minister of Lands, Housing and Human Settlements Development (MLHHSD) to undertake a study on Compensation and Benefits Sharing approaches used in the region. The study was completed and presented to MLHHSD for comments. MLHHSD staff expressed concern regarding the implications of the legal opinions of the powers of local communities to engage directly with investors, but expressed willingness to utilize information from the study in their current efforts to review and revise the Land Act of 1999. SERA Project has received no further communication from the MLHHSD or follow-up from the Commissioner of Lands.

Policy Action Status:

- Stage 2: Stakeholder consultation/public debate.

Tasks completed in Q2 of Y5:

- Presented study at the 2nd Annual Agricultural Policy Conference, February 23-25, 2016.

Contribute to:

- IR 4.5.1-24 Number of agricultural and nutritional enabling environment policies completing the following process/steps of development as a result of USG assistance in each case: 1: Analysis -- 2: Stakeholder consultation/public debate -- 3: Drafting or revision -- 4: Approval (legislative or regulatory) -- 5: Full and effective implementation.
- CI 4.1.1 Number of research outputs.

D. Food Demand

The SERA Project began research on food demand in Year 4 and plans to complete it in Year 5. This study will contribute to a better understanding of the current situation and future trends in food demand, and will in turn be useful in directing resources, such as extension services and marketing into rapidly growing segments of food demand. Such information is essential to evidence-based policy decisions and strategic planning. The study uses data from the most recent household budget survey, and an academic expert identified to provide guidance on the methodology and interpreting of results. Among the expected outcomes of the study are:

- Estimates of price, income, and expenditure elasticities for different food groups;
- Comparisons of food demand patterns between rural and urban households;
- Identification of socio–economic characteristics that affect consumer food demand.

Policy Action Status: Stage 1: Analysis.

Tasks completed in Q2 of Y5:

- Completed initial estimation of food demand.
- STTA travel by Professor Chen Zhen to Tanzania in March to assist with the estimation.

Tasks planned for Q3 of Y5:

- Complete the estimation of food demand.
- Travel to Tanzania by STTA Professor Chen Zhen to complete the Food Demand Study.

Milestones:

- Draft report (Q3).
- Final report and publication (Q4).

Resources:

- SERA Senior Advisor
- SERA Senior Agricultural Policy Advisor
- STTA Professor Chen Zhen.

Key Partners: iAGRI, MSU.

Contribute to:

- IR 4.5.1-24 Number of agricultural and nutritional enabling environment policies completing the following process/steps of development as a result of USG assistance in

each case: 1: Analysis -- 2: Stakeholder consultation/public debate -- 3: Drafting or revision -- 4: Approval (legislative or regulatory) -- 5: Full and effective implementation.

- CI 4.1.1 Number of research outputs.

COMPONENT II: INDIVIDUAL AND INSTITUTIONAL CAPACITY BUILDING

The SERA Project's approach to capacity building is twofold. The first approach focuses on institutional capacity building activities of selected organizations that can provide the greatest impact to support development of an enabling policy environment. The second approach addresses increasing capacity for research and evidenced-based policy analysis of individuals through training and support for research and policy analysis.

The SERA Project continues to focus its support on public sector institutions, providing institutional and individual capacity building to support the implementation of policy reforms. Public sector support in Year 4 was extended to include institutional training with the MAFC Department of Policy and Planning. Policy research activities have expanded opportunities to provide capacity building to individuals representing various GOT institutions through the development of local policy research teams. In addition, SERA Project provided strategic support to the Tanzania Agricultural Seed Traders Association (TASTA) and the Rice Council of Tanzania (RCT).

A. Ministry of Agriculture, Livestock and Fisheries, National Food Security Department

SERA Project continued to work with the United States Department of Agriculture Economic Research Service to support the adoption of the Food Basket Methodology by the MAFC National Food Security Department (NFSD). The focus of activities was on the development and implementation of a Food Basket pilot program that would help ensure stakeholder ownership and long-term sustainability.

The Department of Policy and Planning in MAFC expressed strong interest in the FBM and the implementation of recommendations from the Policy Options Paper. This led to the DPP submitting a proposal for a feasibility study for a Market Intelligence Unit, and training by SERA of the Platform for Agricultural Policy Analysis and Coordination (PAPAC) unit on the FBM.

i. Food Basket Methodology - NFSD

SERA Project and ERS of the USDA have provided support to the MAFC National Food Security Department for the development of a pilot activity that would address questions and concerns of the NFSD regarding data sources and income calculation for measuring access. USDA ERS returned to Tanzania in February to work intensively with three of the NFSD staff to begin the desk study. NFSD participants gathered monthly prices for 2014 and 2015 for the 12 monitored crops from four districts: Morogoro Urban, Mvomero District, Dodoma Urban, and Bahi District. The team also examined the feasibility of estimating household income using the results from the Household Economic Approach (HEA), which is currently underway in selected livelihood zones. As a next step, the MALF team will analyze four districts as a pilot:

- Bahi District of Dodoma,

- Kilosa District of Morogoro,
- Masasi District of Mtwara,
- Longido District of Arusha.

SERA Project provided continuous technical assistance throughout March to the MALF NFSD team. The team analyzed market prices from these four districts for 2014 and 2015, and for January and February 2016 where available. The team also continued to work on using the HEA to estimate monthly income for the pilot districts during the reference years.

The NFSD has requested support for field visits to the pilot districts. In Q3 the NFSD team will complete the pilot study. They will be able to identify data gaps and will be in a better position to develop a clear set of objectives and deliverables for the proposed field visits. USDA ERS will return in Q3 to review the proposal and agree on next steps.

Policy Action Status:

- Stage 2: Stakeholder consultation/public debate.
  The target policy status for Year 5 is *Stage 5: Full and effective implementation*. This activity remains in Stage 2.

Tasks completed in Q2 of Y5:

- Completed desk study research and data analysis for FBM pilot activity.

Tasks planned for Q3 of Y5:

- Review of desk study FBM, determine next steps.

Milestones:

- Pilot activity completed (Q3).

Resources:

- SERA Chief of Party
- SERA Senior Agricultural Advisor
- SERA Communications and Capacity Building Specialist
- SERA Policy Analyst.

Key Partners: MALF Department of Food Security, USDA ERS.

Contribute to:

- IR 4.5.1-24 Number of agricultural and nutritional enabling environment policies completing the following process/steps of development as a result of USG assistance in each case: 1: Analysis -- 2: Stakeholder consultation/public debate -- 3: Drafting or revision -- 4: Approval (legislative or regulatory) -- 5: Full and effective implementation.
- IR 4.5.2-7 Number of individuals who have received USG supported short-term agricultural sector productivity or food security training.
- CI 4.2.1. Number of institutions receiving USG assistance.

B. Ministry of Agriculture, Livestock and Fisheries, Department of Policy and Planning

In Q4 of Year 4, the DPP requested support for a feasibility study on the creation of a Market Intelligence Unit. National elections and re-structuring of the MAFC led to delays in starting this activity. David Nyange, the MALF advisor, presented the MIU statement of work (SOW) to the

new MALF management team. The management team requested that the MIU team accelerate the activity and include a concept design to begin operations on July 1, 2016 as a pilot unit inside the MALF DPP. It is anticipated that the pilot unit will be supported by the continuing MSU activity, the ASPIRE project.

Policy Action Status: NA.
Tasks completed in Q2 of Y5: None.
Tasks planned for Q3 of Y5:

- Arrange meeting with MIU team members, David Nyange, and USAID SERA.
- Revise the work program.
- Start work program.

Milestones:

- Kick-Off Meeting with Stakeholders (Q1).
- Draft Study (Q2).
- Presentation of final Study to Stakeholders (Q3).

Resources:

- Diligent Consulting
- SERA COP
- SERA Senior Agricultural Policy Advisor.

Key Partners: MAFC, MSU, PAPAC.
Contributes to:

- IR 4.5.1-24 Number of agricultural and nutritional enabling environment policies completing the following processes/steps of development as a result of USG assistance in each case: State 1, Analysis; State 2, Stakeholder consultation/public debate; Stage 3, Drafting or revision; Stage 4, Approval (legislative or regulatory); Stage 5, Full and effective implementation.
- IR 4.5.2-7 Number of individuals who have received USG support short-term agricultural sector productivity of food security training.
- CI 4.2.1. Number of institutions receiving USG assistance.

C. Strategic Support – Advocacy Organizations

Private sector organizations that are key stakeholders in policy reform activities will be considered for strategic capacity building support in Year 5. Organizations identified for potential support include:

- **TASTA.** In Year 5, SERA will continue to provide support to TASTA for stakeholder engagement and public private sector dialogue with the GOT. SERA Project supported a one-day stakeholder workshop on March 11, 2016 in Arusha with 68 participants from the public and private sectors. The agenda include updates on public access to government seeds and issues related to seed packaging taxation. Also discussed was Maize Lethal Necrosis Disease (MLND), its impact and mitigation efforts.

- **Rice Council of Tanzania.** The SERA Project will continue to provide personnel support for policy analysis in Year 5. It is anticipated that the personnel support will be picked up as a direct cost under RCT at the conclusion of SERA Project.

Additional support will be provided on a case-by-case basis. This may include support to attend events, support for stakeholder engagement, and communications development.

Related Policy Action Status: NA.
Tasks completed in Q2 of Y5:
- Provided support for TASTA stakeholders' workshop.
- Continued support for RCT Policy Analyst.

Tasks planned for Q3 of Y5:
- Provide strategic support based on demand.

Milestones: TBD.
Resources:
- SERA Communications and Capacity Building Specialist
- SERA Senior Agriculture Policy Advisor.

Key Partners: TASTA, RCT.
Contribute to:
- IR 4.5.2-7 Number of individuals who have received USG support short-term agricultural sector productivity of food security training.
- CI 4.2.1 Number of institutions receiving USG assistance.

D. Sokoine University

The SERA Project collaborations with iAGRI ended at the end of Q2. No further work is planned on the two activities listed below.

i. Policy Seminar Series - *Support concluded*

SERA, iAGRI, and MSU are jointly sponsoring a Policy Seminar Series for faculty and students at Sokoine University to encourage agricultural policy research. The second Policy Seminar Series began in Year 4 where the topical research focused on land. Four papers will be developed and reviewed for comments. iAGRA will continue to implement this activity.

ii. Policy Research Unit - *Closed*

SERA Project and iAGRI have been working together to support the development of a Policy Research Unit in the Department of Agricultural Economics and Agribusiness (DAEA) at Sokoine University. The vision is for the PRU to conduct demand driven evidence-based policy analysis for internal and external clients. MSU has joined this collaboration. Discussion resulted in agreement that a feasibility study should be conducted to ensure institutional readiness and demand for services. The concept continues to evolve, but SERA project is no longer directly involved. MSU in now leading this concept.

COMPONENT III: ADVOCACY AND COMMUNICATIONS

The SERA Project focuses on communication activities that support the policy research agenda and targets public sector institutions. The primary communication instruments are the SERA Project website, policy briefs, and public events such as conferences and stakeholder workshops.

A. SERA Website

The website is the main communications tool for SERA, making available evidence-based research and other key policy information. In Year 5, SERA will begin to transition information and research to local partners.

Related Policy Action Status: NA.
Tasks completed in Q2 of Y5:

- Update content and monitor usage.

Tasks planned for Q3 of Y5:

- Transition information to local partners.

Milestones: NA.
Resources:

- SERA Communications and Capacity Building Specialist.

Key Partners: OMIS.
Contribute to:

- CI 4.1.3 Number of hits/visits to the SERA website.

B. Policy Briefs and Policy Research Briefs

Policy Briefs and Policy Research Briefs summarize specific research and policy recommendations on key issues affecting the agriculture sector and are meant to inform decision makers and stakeholders.

Related Policy Action Status: NA.
Policy Briefs completed in Q2 of Y5:

- Food Basket Costs and Food Security.

Policy Briefs planned for Q3 of Y5:

- Policy Options for Food Security, Agricultural Growth and Poverty Reduction.
- Agriculture Business Environment and Incentives.
- Gender in Maize Marketing and Production.
- Transparent Rules-Based System for Emergency Food Imports.

Policy Research Briefs planned for Q3 of Y5:

- Drivers of Rice Prices.

Milestones:

- Policy Options for Food Security, Agricultural Growth and Poverty Reduction (Q3).
- Agriculture Business Environment and Incentives (Q3)
- Gender in Maize Marketing and Production (Q3).
- Drivers of Rice Prices (Q3).

- Transparent Rules-Based System for Emergency Food Imports (Q3)
- Demand for Food (Q4).

Resources:

- SERA Communications and Capacity Building Specialist
- SERA Policy Analyst
- SERA Senior Advisor.

Key Partners: iAGRI, MSU.

Contribute to:

- CI 4.1.2 Total number of SERA mentions in the press and social media.

C. Policy Conferences and Workshops

The 2nd Annual Agricultural Policy Conference was held during February 23-25 at the Serena Hotel in Dar es Salaam. SERA project played key roles in the planning and execution of this conference. SERA Project chaired the conference communications committee and provided logistical and administrative support to the event. In addition, SERA project was active in the technical program of the event. SERA Policy Project participation included:

- Presentation by Don Mitchell on:
  - Updated Policy Options for Food Security
  - Agriculture Business Environment Study
  - Land Compensation Schemes and Valuation Models (study done by Landesa).
- Presentation by Professor Dale Furnish on Secured Transactions/Collateral Registry.
- Session chaired by Alex Mkindi on Agricultural Inputs.

The program for the conference and all PowerPoint presentations are attached as Annex 6.

Related Policy Action Status: NA.

Tasks completed in Q2 of Y5:

- 2nd Annual Agricultural Policy Conference February 23-25, 2016

Tasks planned for Q3 of Y5:

- Participate in the Policy Agricultural Group (PAG)/Policy Action Committee (PAC) meeting planned for Q3.

Milestones: NA.

Resources:

- SERA Staff
- SERA Senior Advisor.

Key Partners: PAPAC, MSU.

Contribute to:

- CI 4.1.2 Total number of SERA mentions in the press and social media.

D. Success Stories

In Q2, success stories were outlined for the remaining time of the contract.

- Evidence-based research to support policy: Lifting the maize export ban;

- FBM – Zanzibar: Design and implementation of the food basket methodology, including healthy food basket design;
- FBM – Mainland: Design and implementation of a food basket methodology into the food security early warning system;
- Annual Agricultural Policy Conference;
- Rice – Transparent rules-based import/export system, and the creation of the MIU to support further sustained engagement;
- The RCT Story.

Related Policy Action Status: NA.

Tasks completed in Q2 of Y5:

- Drafted Evidence-based research to support policy: Lifting the maize export ban.
- Drafted FBM – Zanzibar: Design and implementation of the food basket methodology, including healthy food basket design.

Tasks planned for Q3 of Y5:

- Finalize Evidence-based research to support policy: Lifting the maize export ban.
- Finalize FBM – Zanzibar: Design and implementation of the food basket methodology, including healthy food basket design.
- Draft FBM – Mainland: Design and implementation of a food basket methodology into the food security early warning system.
- Draft Annual Agricultural Policy Conference.
- Draft Rice – Transparent rules-based import/export system.
- Draft the RCT Story.

Milestones:

- Evidence-based research to support policy: Lifting the maize export ban (Q3).
- FBM – Zanzibar: Design and implementation of the food basket methodology, including healthy food basket design (Q3).
- FBM – Mainland: Design and implementation of a food basket methodology into the food security early warning system (Q4).
- Annual Agricultural Policy Conference (Q4).
- Rice – Transparent rules-based import/export system, and the creation of the MIU to support further sustained engagement (Q4).
- The RCT Story (Q4).

Resources:

- SERA Staff
- SERA Senior Advisor.

Key Partners: MSU, PAPAC, RCT.

Contribute to:

- CI 4.1.2 Total number of SERA mentions in the press and social media.

IMPLEMENTATION PROGRESS - ZANZIBAR

1. Intermediate Result 2: Binding Constraints to Private Sector Investment Reduced

A. Zanzibar Department of Food Security and Nutrition

The SERA Project and the USDA's Economic Research Service is working with the Zanzibar Department of Food Security and Nutrition (DFSN) to support the application of the Food Basket Methodology in the Zanzibar Food Security early warning system. The development of the Food Basket Methodology and training of DFSN staff were completed in Y4, and the DFSN will use the FBM in quarterly presentation of early warning information to the Food Security and Nutrition Committee. In February, USDA ERS met with the DFSN and finalized the composition of the healthy and nutritious food basket. Capacity building and training on the application of the healthy and nutritious food basket was completed for eight members of the DFSN. In March the DFSN began to work with the calculations. USDA and SERA will return to Zanzibar in Q3 to complete the training.

Policy Action Status: NA.

Tasks completed in Q2 of Y5:

- Support the DFSN to develop a healthy and nutritious food basket.
- Support the Director of DFSN to report on the application of FBM in Zanzibar at the Policy Conference.

Tasks planned for Q3 of Y5:

- Training for DFSN on the application of the healthy and nutritious food basket.
- Finalize Zanzibar healthy and nutritious food basket.

Milestones:

- Quarterly report completed by DFSN on the healthy and nutritious food basket (Q3).

Resources:

- SERA Chief of Party
- SERA Senior Agricultural Advisor
- SERA Communications and Capacity Building Specialist
- SERA Policy Analyst.

Key Partners: USDA ERS

Contribute to:

- IR 4.5.2-7 Number of individuals who have received USG supported short-term agricultural sector productivity or food security training.
- CI 4.2.1 Number of institutions receiving USG assistance.

PROJECT MANAGEMENT AND PERFORMANCE

1. Management

In Q2, SERA's Senior Advisor, Don Mitchell, led the project as Interim Chief of Party until the return of COP Marialyce Mutchler on March 14.

PROBLEMS / CHALLENGES

The change in national government continued to cause delays in SERA implementation. The Ministry of Agricultural, Food Security and Cooperatives merged with the Ministry of Livestock and Fisheries. The appointment of new leadership and directors resulted in the delay in the start of the Market Intelligence Unit activity.

CROSS-CUTTING ISSUES

1. Gender

Gender is an important cross cutting issue and the SERA Project is undertaking research to better understand women maize farmers' input use, yields, and price received compared to men maize farmers.

A. Gender in Maize Marketing and Production

Gender is an important cross cutting issue and the SERA Project, in collaboration with the World Bank and the International Finance Corporation, is supporting research to better understand women maize farmers' input use, yields, and price received compared to men maize farmers. This activity will help identify key causes of differences in yields and policy constraints for women farmers, and will make policy recommendations. The results of the study are expected to be available in Q3 of Year 5.

Policy Action Status: NA.

Tasks completed in Q2 of Y5:

- Completed draft report.

Tasks planned for Q3 of Y5

- Complete final report.
- Complete Policy Brief.

Milestones:

- Field research completed (Q1).
- Draft report (Q2).
- Final report delivered to stakeholders (Q3).

Resources:

- SERA Senior Advisor
- SERA Senior Agricultural Policy Advisor
- TNS Social Research Division.

Key Partners: Diligent Consulting.

Contribute to:

- IR 4.5.1-24 Number of agricultural and nutritional enabling environment policies completing the following process/steps of development as a result of USG assistance in each case: 1: Analysis -- 2: Stakeholder consultation/public debate -- 3: Drafting or revision -- 4: Approval (legislative or regulatory) -- 5: Full and effective implementation.
- CI 4.1.1 Number of research outputs.

B. Gender representation in SERA activities.

SERA Project training activities track the inclusion of women in policy analysis, advocacy, and dialogue. In Q2, women represented 43% of all training participants

SERA Project staff gender representation is 50% women and 50% men.

2. Poverty

Tanzania has made significant progress in reducing poverty in recent years, with rural poverty declining by 15% from 2007 to 2011 according to the National Bureau of Statistics. However, poverty remains high and an estimated 80% of the poor live in rural areas and depend directly or indirectly on the agricultural sector for their livelihoods. The SERA Policy Project has focused on improving agricultural policies through evidence-based research and policy reform that contributes to reducing poverty. An example of the contribution of the SERA Project's research on policy was the Government's decision to lift the maize export ban in 2012 based on SERA policy research. That policy reform provides farmers greater access to foreign markets and the opportunity to receive higher prices for their marketed maize. It also provides greater employment opportunities for labor in rural areas to support expanded exports. The SERA Project has also been actively involved in improving access to high quality inputs that can raise productivity and reduce costs. Since an estimated 80% of Tanzanian farmers produce maize, the impact of improved access to markets and high quality inputs directly contributes to alleviating poverty.

3. Climate Change

Climate change is a serious concern for Tanzania because it could lead to increased variability in production and lower crop yields. One way to reduce the reliance on climate is to better utilize water resources and that should remain a long-term strategy. However, policies can also be used to offset the impacts of climate change and should be utilized as a low-cost approach to dealing with the impacts of climate change. The SERA Project research on Drivers of Maize Prices showed that open border policies reduce maize price variability and can help alleviate the impact of increased production variability on prices due to climate change. Other research presented by SERA Project showed that Tanzania could also face improved export opportunities as neighboring countries increase food crop imports to offset lower and more variable production, and more open trade policies would allow Tanzania to take advantage of these expanded export opportunities.

SERA Project's work with the Revolutionary Government of Zanzibar (RGoZ) on the potential to increase irrigated paddy areas on Zanzibar also contribute to work on Climate Change. The work was part of an effort to develop a strategy to reduce reliance on rain-fed rice due to concerns over climate change. The analysis also considered technologies that could raise irrigated paddy yield and better utilize limited ground water supplies.

FINANCIAL SUMMARY

QUARTERLY REPORT	SERA YEAR 5 - QTR 2				
	Jan-16	Feb-16	Mar-16	Quarter Total	Contract Cumulative
Reimbursable Costs	$280,433	$126,852	$226,465	$633,750	$6,690,360
Fee	$21,682	$10,010	$17,905	$49,597	$536,763
Reimbursable Costs plus Fixed Fee	**$302,115**	**$136,862**	**$244,370**	**$683,347**	**$7,227,123**
Contract Cumulative	**$6,845,891**	**$6,982,754**	**$7,227,123**		

Table 1. USAID Standard Indicator and Required if Applicable Indicator Targets for Life of Contract

Indicator		Baseline	Y5 Target	Q1 Actual	Q2 Actual	Q3 Projected	Q4 NA	Y5 Total	LIFE OF CONTRACT TARGET
IR 4.5.2-7. Number of individuals who have received USG supported short-term agricultural sector productivity or food security training (RiA) (WOG).	New	0	80	0	NA	NA			1,700
	Continue	0	100	0	NA	NA			
	Male	0	60	2	12	25		14	
	Female	0	30	0	9	15		9	
IR 4.5.2-36 Value of exports of targeted agricultural commodities as a result of USG assistance (S).	Maize	$20,820,000	$34,990,000	NA	NA	NA		0	$56,749,200
	Rice	$37,050,000	$38,500,000	NA	NA	NA		0	NA
IR 4.5.2-30 Number of MSMEs, including farmers, receiving USG assistance to access loans (S).	Medium	0	0	0	0	0		0	2,400
	Small	0	0	0	0	0		0	350
	Micro	0	0	0	0	0		0	250
IR 4.5.1-24 Number of agricultural and nutritional enabling environment policies completing the following process/steps of development as a result of USG assistance in each case (S):	NA								
• Stage 1: Analysis		0	1	0	0	0		0	2
• Stage 2: Stakeholder consultation/public debate;		0	0	0	4	3		4	3
• Stage 3: Drafting or revision;		0	1	0	0	0		0	3
• Stage 4: Approval (legislative or regulatory).		0	0	0	0	0		0	0
• Stage 5: Full and effective implementation.		0	0	0	0	0		0	6

Table 2. Project/Custom Level Indicator Targets for Life of Contract

Indicator	Baseline	Y5 Target	Q1 Actual	Q2 Actual	Q3 Projected	Q4 NA	Y5 Total	LIFE OF CONTRACT TARGET
1.1.1 Volume of improved seed available in domestic market	26,545 tons	5,000 tons	NA	NA	NA		NA	36,000 tons
4.1.1. Number of research output	0	4	0	0	1		0	7
4.1.2 Total number of SERA mentions in the press and social media	0	5	0	0	0		0	40
4.1.3 Number of hits/visits to the SERA website	0	1,800	734*	210	800		944	9,000
4.2.1 Number of institutions receiving USG assistance	0	4	2	10	3		12	15

**Google Analytics is used to track this indicator. Tracking began on 2 December 2014.*

ANNEXES

Annex 1. Trip Report – Agriculture Business Environment, Mozambique Study Tour

Please see attachment ***SERA Year 5 Quarterly Report 2, Attachment A***.

SERA Year 5 Quarterly Report 2, Attachment A

Mozambique Study Tour Report on Agriculture Business Environment

January 17th -23rd 2016

A study tour to Mozambique was undertaken by USAID-SERA project in collaboration with the President's Delivery Bureau (PDB) and the Tanzania Investment Centre (TIC) to learn about the corporate agriculture business environment as part of the study on agriculture business environment in Tanzania.

Team Members: Don Mitchell, Team Leader (SERA), Edith Lazaro (SERA), James Ngwira (PDB) and Martin Masalu (TIC)

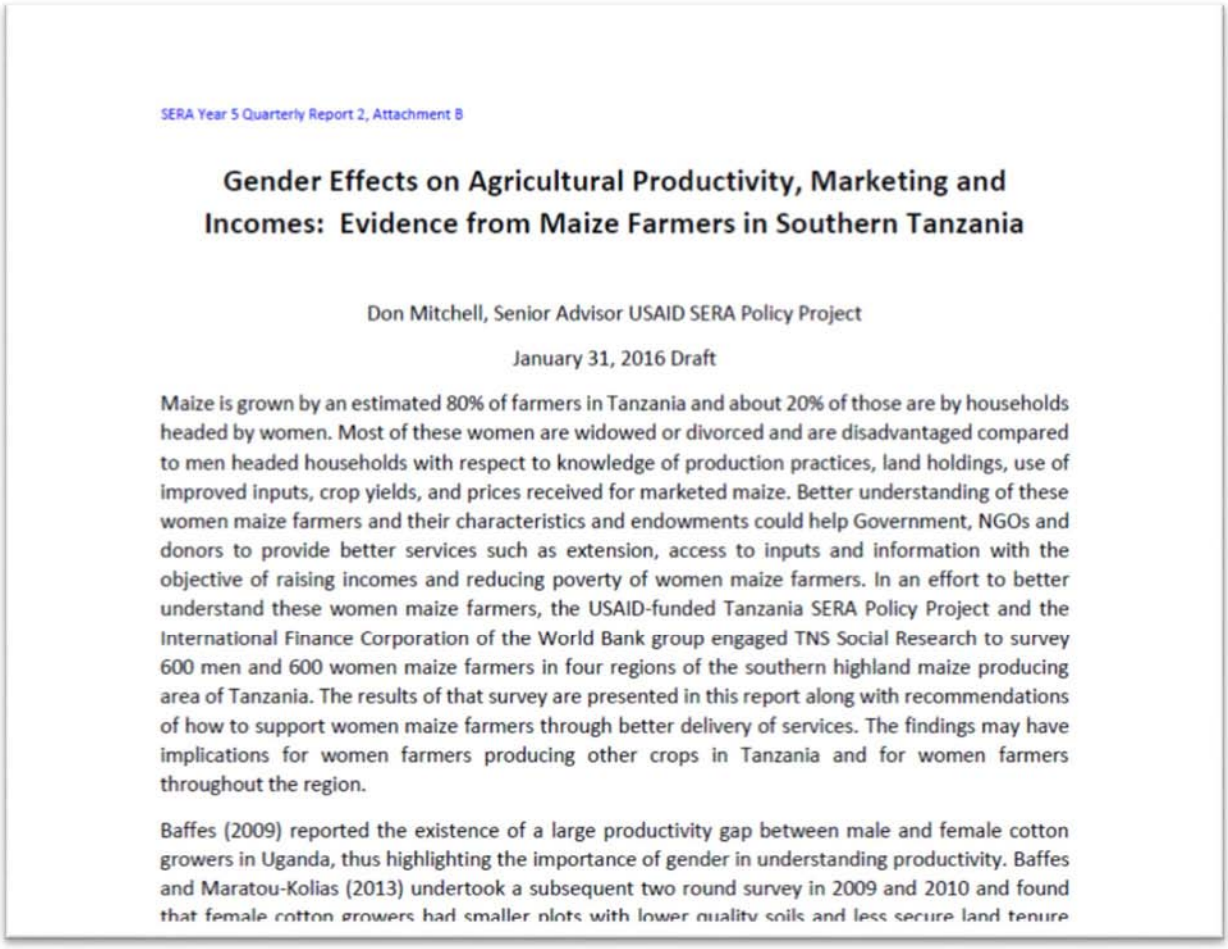
Interviews Conducted: MSU Agriculture and Food Security Project, Directorate of Private sector Support (DASP), Institute for Promotion of Small Industries (IPEME), Banco Tera (BTM), Development Finance Organization (GAPI), Centre for policy and research, Commercial and Investment Bank (BCI), KPMG, PWC, National Directorate of Land, Ministry of Agriculture and Food Security, Centre for Promotion of Agriculture (CEPAGRI), Investment Promotion Centre (CPI), Beira Agricultural Growth Corridor (BAGCP), Association of Sugar Producers of Mozambique (APAMO), National Sugar Distributor (DNA).

Conclusion:

Mozambique provides special incentives to agriculture such as, a reduced corporate tax rates, VAT exemptions for agricultural Inputs, and fuel subsidies. However, the incentives have not attracted many investors because of the long, cumbersome and unpredictable procedures for acquiring land. All land is owned by the Government and most is controlled under customary rights by communities. An investor

Annex 2. Draft Report –Gender and Maize Productivity and Marketing in Tanzania

Please see attachment ***SERA Year 5 Quarterly Report 2, Attachment B***.



SERA Year 5 Quarterly Report 2, Attachment B

Gender Effects on Agricultural Productivity, Marketing and Incomes: Evidence from Maize Farmers in Southern Tanzania

Don Mitchell, Senior Advisor USAID SERA Policy Project

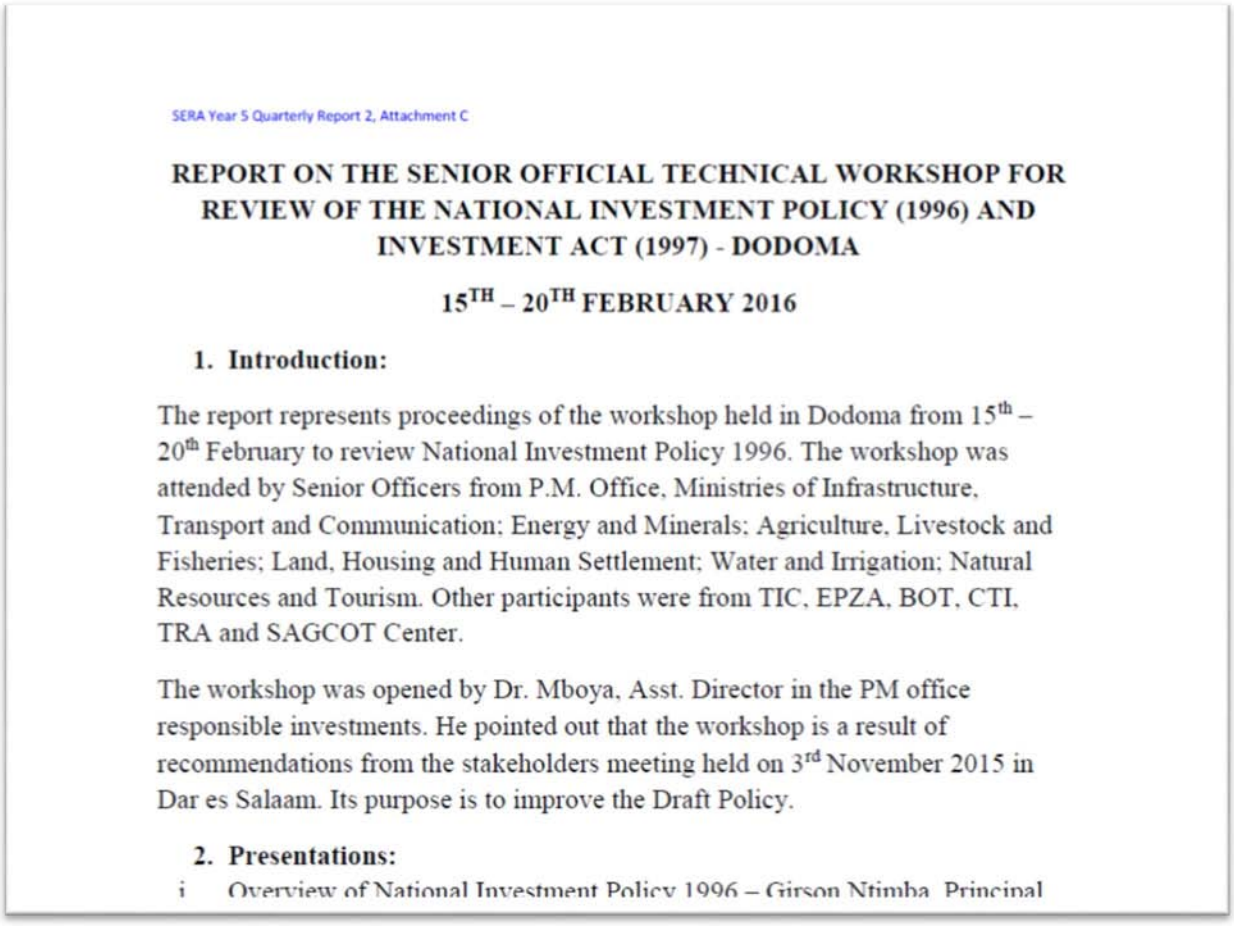
January 31, 2016 Draft

Maize is grown by an estimated 80% of farmers in Tanzania and about 20% of those are by households headed by women. Most of these women are widowed or divorced and are disadvantaged compared to men headed households with respect to knowledge of production practices, land holdings, use of improved inputs, crop yields, and prices received for marketed maize. Better understanding of these women maize farmers and their characteristics and endowments could help Government, NGOs and donors to provide better services such as extension, access to inputs and information with the objective of raising incomes and reducing poverty of women maize farmers. In an effort to better understand these women maize farmers, the USAID-funded Tanzania SERA Policy Project and the International Finance Corporation of the World Bank group engaged TNS Social Research to survey 600 men and 600 women maize farmers in four regions of the southern highland maize producing area of Tanzania. The results of that survey are presented in this report along with recommendations of how to support women maize farmers through better delivery of services. The findings may have implications for women farmers producing other crops in Tanzania and for women farmers throughout the region.

Baffes (2009) reported the existence of a large productivity gap between male and female cotton growers in Uganda, thus highlighting the importance of gender in understanding productivity. Baffes and Maratou-Kolias (2013) undertook a subsequent two round survey in 2009 and 2010 and found that female cotton growers had smaller plots with lower quality soils and less secure land tenure

Annex 3. Trip Report – National Investment Policy and Investment Act Technical Workshop

Please see attachment ***SERA Year 5 Quarterly Report 2, Attachment C***.



SERA Year 5 Quarterly Report 2, Attachment C

REPORT ON THE SENIOR OFFICIAL TECHNICAL WORKSHOP FOR REVIEW OF THE NATIONAL INVESTMENT POLICY (1996) AND INVESTMENT ACT (1997) - DODOMA

15TH – 20TH FEBRUARY 2016

1. Introduction:

The report represents proceedings of the workshop held in Dodoma from 15th – 20th February to review National Investment Policy 1996. The workshop was attended by Senior Officers from P.M. Office, Ministries of Infrastructure, Transport and Communication; Energy and Minerals; Agriculture, Livestock and Fisheries; Land, Housing and Human Settlement; Water and Irrigation; Natural Resources and Tourism. Other participants were from TIC, EPZA, BOT, CTI, TRA and SAGCOT Center.

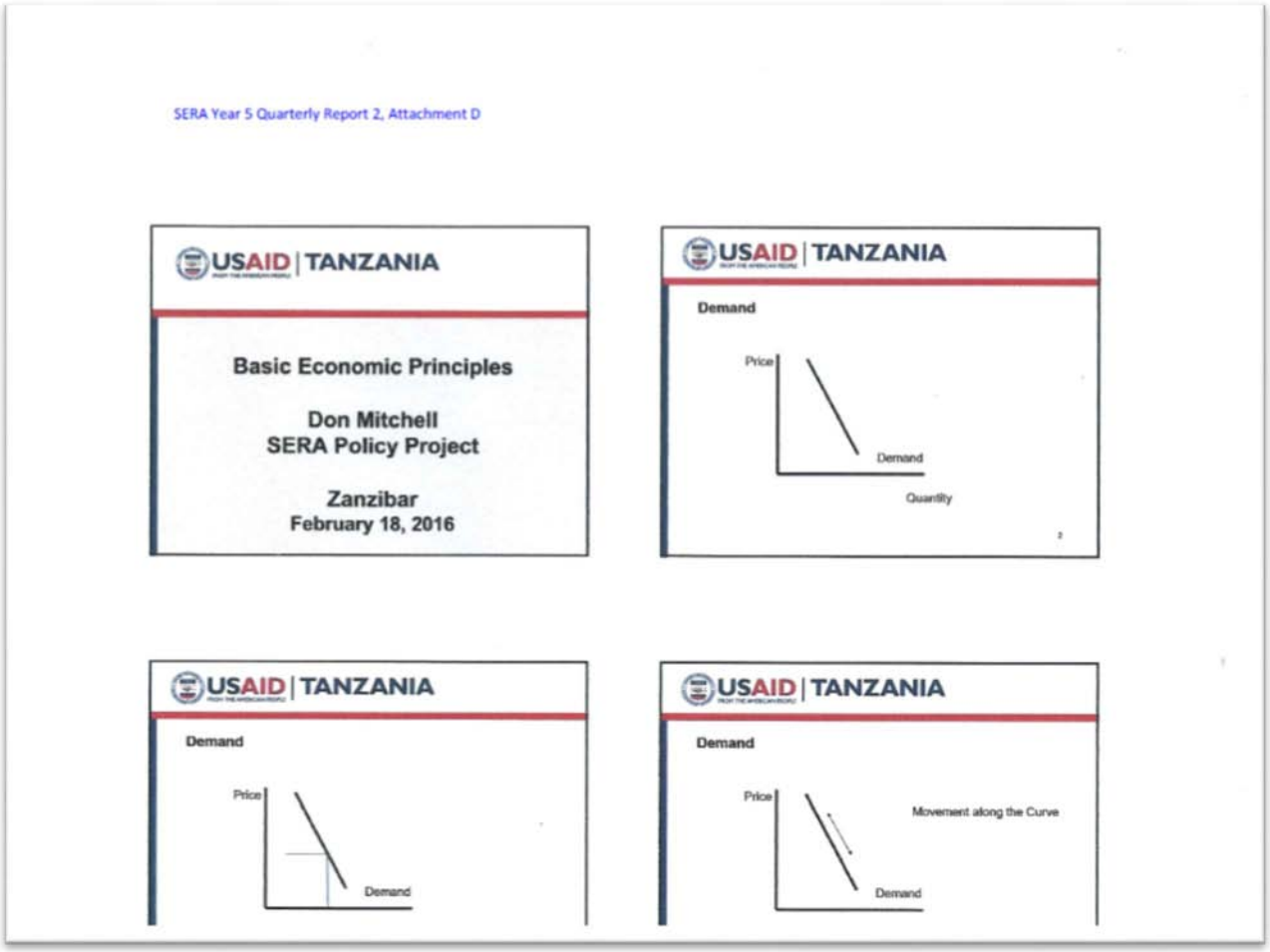
The workshop was opened by Dr. Mboya, Asst. Director in the PM office responsible investments. He pointed out that the workshop is a result of recommendations from the stakeholders meeting held on 3rd November 2015 in Dar es Salaam. Its purpose is to improve the Draft Policy.

2. Presentations:

i Overview of National Investment Policy 1996 – Girson Ntimba, Principal

Annex 4. Training Material – Basic Economic Principles for FBM Training, Zanzibar

Please see attachment ***SERA Year 5 Quarterly Report 2, Attachment D***.



Annex 5. Policy Brief – Food Basket Costs in Tanzania

Please see attachment ***SERA Year 5 Quarterly Report 2, Attachment E***.

SERA Year 5 Quarterly Report 2, Attachment E

USAID
FROM THE AMERICAN PEOPLE

FEED THE FUTURE
The U.S. Government's Global Hunger & Food Security Initiative



September 2015, Policy Brief No. 3

SERA Policy Brief

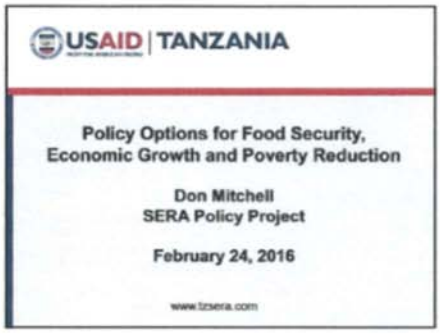
Food Basket Costs in Tanzania *

Food is the largest expenditure item for the typical Tanzanian household and accounts for significantly more than half of total expenditures for the poorest. Consequently, food prices and food costs are very important to consumers and to the Government of the United Republic of Tanzania (GOT) as it addresses food security concerns. Since the typical diet and food prices vary greatly across Tanzania, it is important to consider the

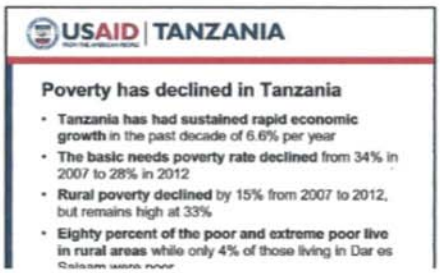
Annex 6. Programme and Presentations – Agricultural Policy Conference

Please see attachment

- ***SERA Year 5 Quarterly Report 2, Attachment F***
- ***SERA Year 5 Quarterly Report 2, Attachment G***
- ***SERA Year 5 Quarterly Report 2, Attachment H***
- ***SERA Year 5 Quarterly Report 2, Attachment I***
- ***SERA Year 5 Quarterly Report 2, Attachment J.***


USAID | TANZANIA
Policy Options for Food Security, Economic Growth and Poverty Reduction
Don Mitchell
SERA Policy Project
February 24, 2016
www.tzsera.com


USAID | TANZANIA
Food Security has Many Dimensions
Increasing food availability through improved incentives to farmers
Ensuring access to food by providing safety nets to the poorest and most vulnerable
Ensuring utilization of food through adequate diets and food fortification
Enhancing stability by reducing price volatility, increasing storage and reducing post-harvest losses
Source: World Food Summit Declaration


USAID | TANZANIA
Poverty has declined in Tanzania
Tanzania has had sustained rapid economic growth in the past decade of 6.6% per year
The basic needs poverty rate declined from 34% in 2007 to 28% in 2012
Rural poverty declined by 15% from 2007 to 2012, but remains high at 33%
Eighty percent of the poor and extreme poor live in rural areas while only 4% of those living in Dar es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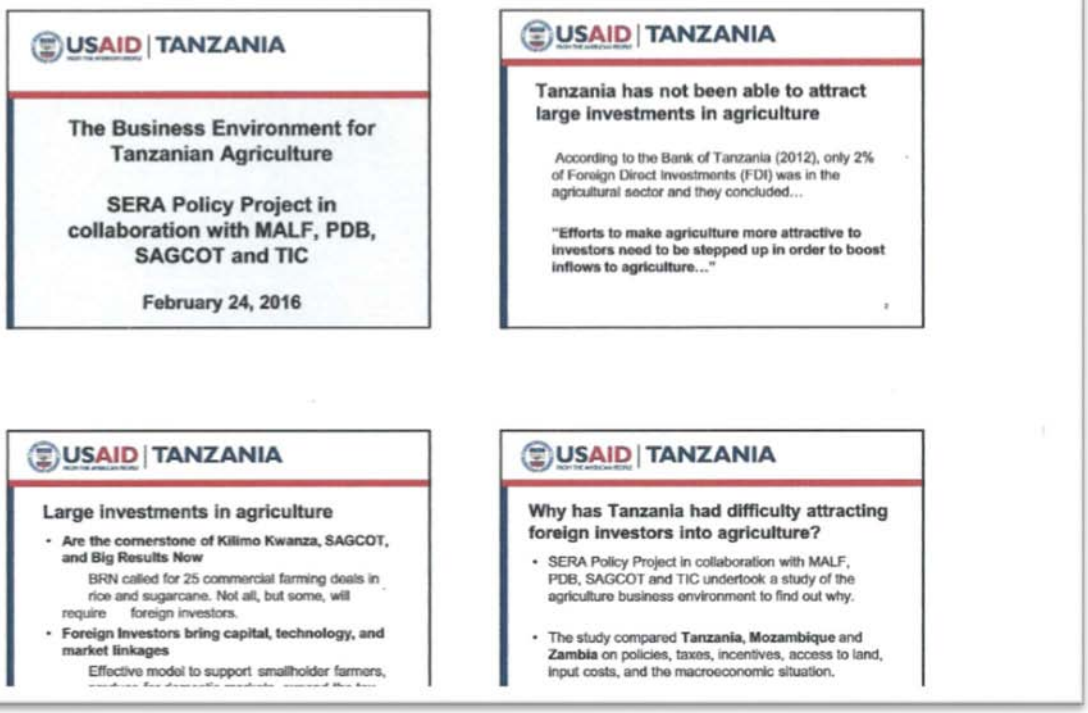
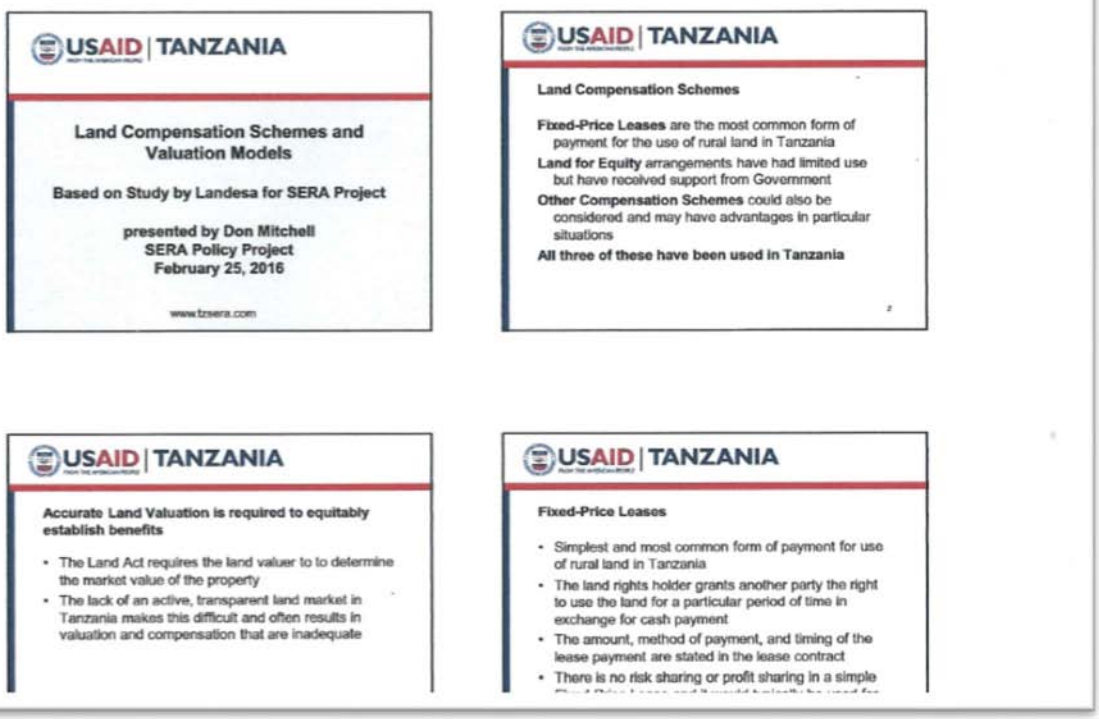
Most cost-effective way to promote food security in the long run
Exploit Tanzania's comparative advantage within the region in food crops production -- especially maize and rice
Involve the poorer elements of the population as farmers or wage laborers to increase their incomes to improve food security
Encourage exports of surplus production to the


USAID | TANZANIA
The Business Environment for Tanzanian Agriculture
SERA Policy Project in collaboration with MALF, PDB, SAGCOT and TIC
February 24, 2016
USAID | TANZANIA
Tanzania has not been able to attract large investments in agriculture
According to the Bank of Tanzania (2012), only 2% of Foreign Direct Investments (FDI) was in the agricultural sector and they concluded...
"Efforts to make agriculture more attractive to investors need to be stepped up in order to boost inflows to agriculture..."
USAID | TANZANIA
Large investments in agriculture
Are the cornerstone of Kilimo Kwanza, SAGCOT, and Big Results Now
BRN called for 25 commercial farming deals in rice and sugarcane. Not all, but some, will require foreign investors.
Foreign investors bring capital, technology, and market linkages
Effective model to support smallholder farmers,
USAID | TANZANIA
Why has Tanzania had difficulty attracting foreign investors into agriculture?
SERA Policy Project in collaboration with MALF, PDB, SAGCOT and TIC undertook a study of the agriculture business environment to find out why.
The study compared Tanzania, Mozambique and Zambia on policies, taxes, incentives, access to land, input costs, and the macroeconomic situation.


USAID | TANZANIA
Land Compensation Schemes and Valuation Models
Based on Study by Landesa for SERA Project
presented by Don Mitchell
SERA Policy Project
February 25, 2016
www.tzsera.com
USAID | TANZANIA
Land Compensation Schemes
Fixed-Price Leases are the most common form of payment for the use of rural land in Tanzania
Land for Equity arrangements have had limited use but have received support from Government
Other Compensation Schemes could also be considered and may have advantages in particular situations
All three of these have been used in Tanzania
2
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Accurate Land Valuation is required to equitably establish benefits
The Land Act requires the land valuer to to determine the market value of the property
The lack of an active, transparent land market in Tanzania makes this difficult and often results in valuation and compensation that are inadequate
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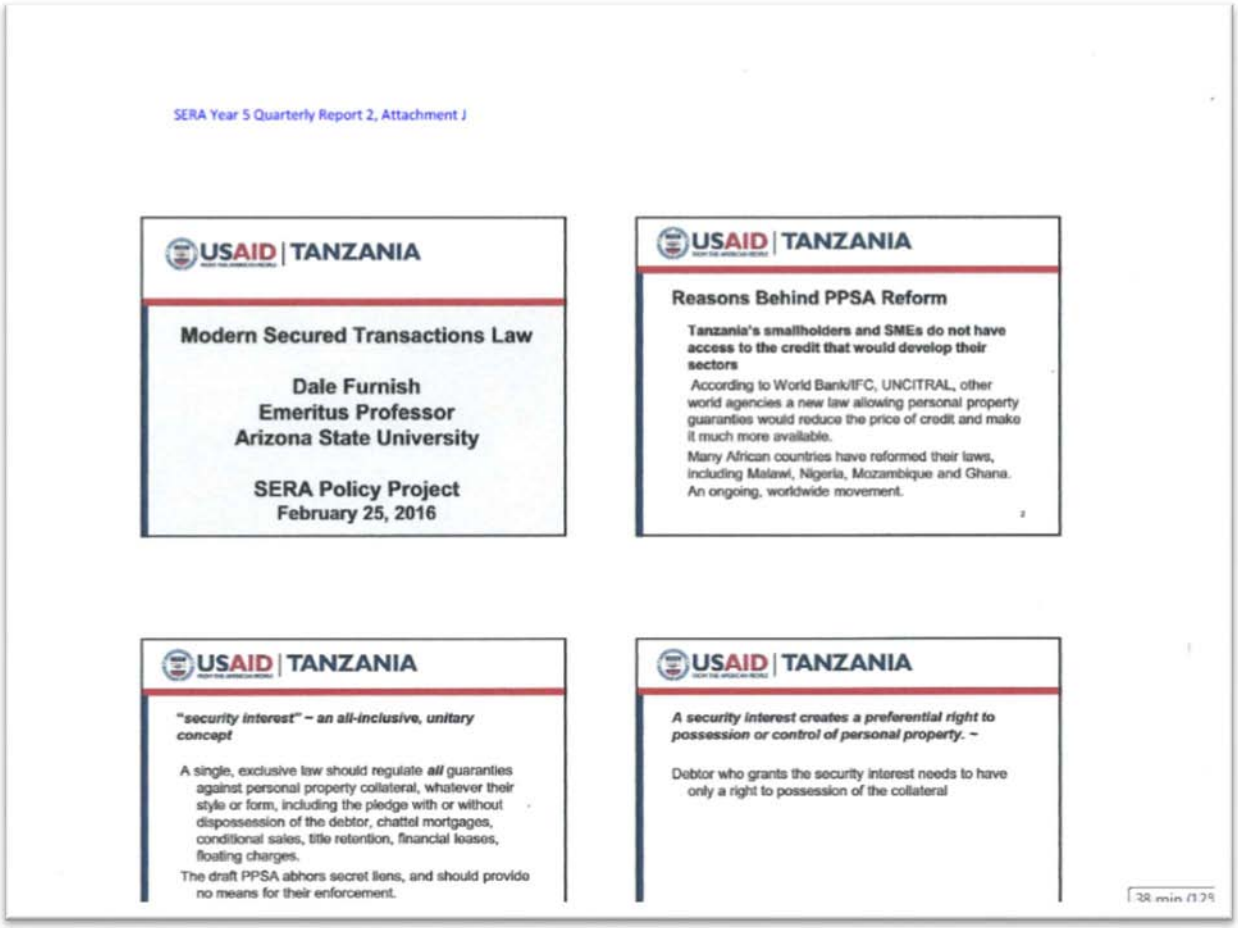
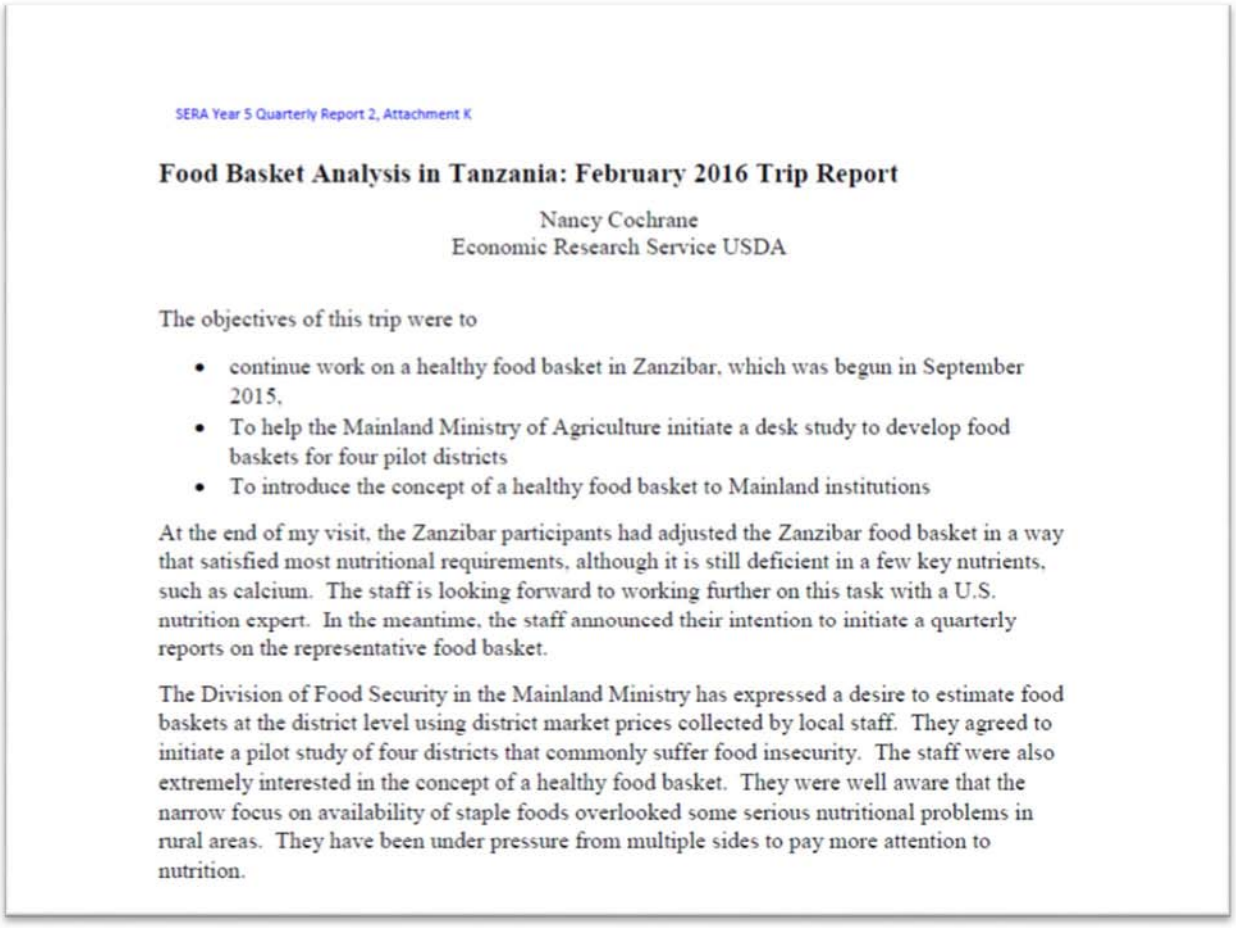
Fixed-Price Leases
Simplest and most common form of payment for use of rural land in Tanzania
The land rights holder grants another party the right to use the land for a particular period of time in exchange for cash payment
The amount, method of payment, and timing of the lease payment are stated in the lease contract
There is no risk sharing or profit sharing in a simple

SERA Year 5 Quarterly Report 2, Attachment J



Annex 7. Trip Report – Food Basket Analysis

Please see attachment ***SERA Year 5 Quarterly Report 2, Attachment K***.



SERA Year 5 Quarterly Report 2, Attachment K

Food Basket Analysis in Tanzania: February 2016 Trip Report

Nancy Cochrane
Economic Research Service USDA

The objectives of this trip were to

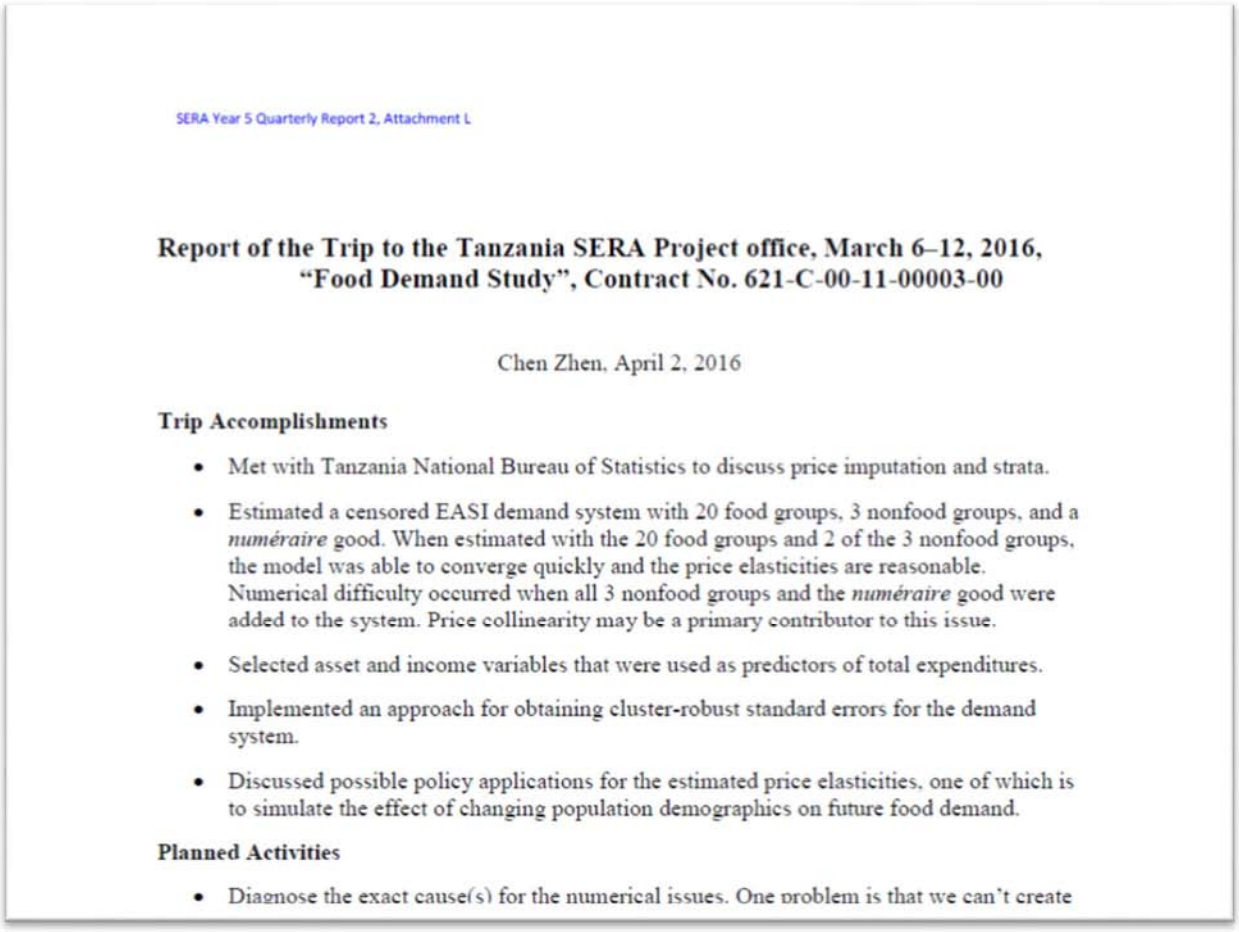
- continue work on a healthy food basket in Zanzibar, which was begun in September 2015,
- To help the Mainland Ministry of Agriculture initiate a desk study to develop food baskets for four pilot districts
- To introduce the concept of a healthy food basket to Mainland institutions

At the end of my visit, the Zanzibar participants had adjusted the Zanzibar food basket in a way that satisfied most nutritional requirements, although it is still deficient in a few key nutrients, such as calcium. The staff is looking forward to working further on this task with a U.S. nutrition expert. In the meantime, the staff announced their intention to initiate a quarterly reports on the representative food basket.

The Division of Food Security in the Mainland Ministry has expressed a desire to estimate food baskets at the district level using district market prices collected by local staff. They agreed to initiate a pilot study of four districts that commonly suffer food insecurity. The staff were also extremely interested in the concept of a healthy food basket. They were well aware that the narrow focus on availability of staple foods overlooked some serious nutritional problems in rural areas. They have been under pressure from multiple sides to pay more attention to nutrition.

Annex 8. Trip Report – Food Demand Study

Please see attachment ***SERA Year 5 Quarterly Report 2, Attachment L***.



SERA Year 5 Quarterly Report 2, Attachment L

Report of the Trip to the Tanzania SERA Project office, March 6–12, 2016, "Food Demand Study", Contract No. 621-C-00-11-00003-00

Chen Zhen, April 2, 2016

Trip Accomplishments

- Met with Tanzania National Bureau of Statistics to discuss price imputation and strata.
- Estimated a censored EASI demand system with 20 food groups, 3 nonfood groups, and a *numéraire* good. When estimated with the 20 food groups and 2 of the 3 nonfood groups, the model was able to converge quickly and the price elasticities are reasonable. Numerical difficulty occurred when all 3 nonfood groups and the *numéraire* good were added to the system. Price collinearity may be a primary contributor to this issue.
- Selected asset and income variables that were used as predictors of total expenditures.
- Implemented an approach for obtaining cluster-robust standard errors for the demand system.
- Discussed possible policy applications for the estimated price elasticities, one of which is to simulate the effect of changing population demographics on future food demand.

Planned Activities

- Diagnose the exact cause(s) for the numerical issues. One problem is that we can't create

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Mozambique Study Tour Report on Agriculture Business Environment

January 17th -23rd 2016

A study tour to Mozambique was undertaken by USAID-SERA project in collaboration with the President's Delivery Bureau (PDB) and the Tanzania Investment Centre (TIC) to learn about the corporate agriculture business environment as part of the study on agriculture business environment in Tanzania.

Team Members: Don Mitchell, Team Leader (SERA), Edith Lazaro (SERA), James Ngwira (PDB) and Martin Masalu (TIC)

Interviews Conducted: MSU Agriculture and Food Security Project, Directorate of Private sector Support (DASP), Institute for Promotion of Small Industries (IPEME), Banco Tera (BTM), Development Finance Organization (GAPI), Centre for policy and research, Commercial and Investment Bank (BCI), KPMG, PWC, National Directorate of Land, Ministry of Agriculture and Food Security, Centre for Promotion of Agriculture (CEPAGRI), Investment Promotion Centre (CPI), Beira Agricultural Growth Corridor (BAGCP), Association of Sugar Producers of Mozambique (APAMO), National Sugar Distributor (DNA).

Conclusion:

Mozambique provides special incentives to agriculture such as, a reduced corporate tax rates, VAT exemptions for agricultural Inputs, and fuel subsidies. However, the incentives have not attracted many investors because of the long, cumbersome and unpredictable procedures for acquiring land. All land is owned by the Government and most is controlled under customary rights by communities. An investor must reach agreement with the community and then get government approval to obtain a land-use title. This can take up to two years or longer. Once title is obtained, the investor must carefully manage relationships with the community in order to avoid disputes over the right to use the land.

Main Findings:

Investments in corporate agriculture are still very low in Mozambique. According to the Agricultural Census of 2009-2010, there were only 15 large commercial farms with 1,000 hectares or more. The successful commercial investments in agriculture are usually the few well established large companies with influence to lobby to their advantage and with enough capital to withstand the high risk in the sector. Most of these investments are foreign owned (South Africa, China, Zimbabwe, etc).

Acquiring land is a challenge to investors in Mozambique. There is no land market and it is illegal to sell land. However, land-use rights can be transferred through the sale of improvements on the land (irrigation scheme, buildings, trees etc). The title to use land (DUAT) can be obtained with consent of the local community and approval of the government. Despite there being a clear law on land ownership and exchange it is still very difficult for an investor to acquire land in Mozambique, mainly because there is no readily available land identified for investment. This burdens an investor with the task of

identifying an area for investment and processing the DUAT without much help from the government. On paper the process of acquiring a DUAT is 90 days while in practice it could take up to 4 years.

The agricultural sector is one of the most incentivized sectors in Mozambique. The sector enjoys preferential treatment in taxation which include; a corporate income tax rate for production agriculture of 10%, exemptions on import duty on equipment, a 50% reduction of fuel taxes and incident tax on diesel used in agriculture, a 10% reduction per each Kw/hour of electricity used in agricultural activity, VAT exemption/ reduction on inputs and construction on irrigation schemes. The incentives expired in 2015 but are being reviewed and there is no indication that these incentives will be reduced upon review.

Specific Findings:

Agricultural Sector: Agriculture contributes 25% of the country's GDP and employs about 80% of the population. The country has 36 million hectares of arable land with only 5.4 million hectares under cultivation. The Mozambican agricultural sector is predominantly subsistence agriculture, with 99.5% of all farming under smallholders who own less than 1 hectare of land. The sector is characterized by low use of technology, poor infrastructure, and weak institutional frameworks. Fertilizer use is among the lowest in the region at 5 kg per farmer.

Profitability of Agricultural Sector: Profitability in the sector is very low due to the high interest rates (18-22%), high risks from drought and floods, and cyclical commodity prices. The low use of technology and poor infrastructure makes Mozambican farmers highly vulnerable to weather shocks and diseases. On average 75% of all start-ups in agriculture fail within 5 years according to one of the banks that lends to the sector.

Transfer of Capital, Profits and Dividends

The Mozambique Central Bank controls all transfers of direct investments and inward and outward payments. The administrative procedure for the repatriation of capital, profits, and dividends in foreign exchange transactions, can take a long time as it requires authorization from the Ministry of Finance.

Acquiring Land use rights: There are three ways to acquire land in Mozambique:

i) Customary Law: Mozambicans acquire land-use rights based on ancestral ties.
ii) Good-Faith: Mozambicans can acquire land-use rights from the government if they have occupied a piece of land for at least 10 years.
iii) Application: Both Mozambican and foreigners can acquire land-use rights from the government by applying for a land title called a DUAT. Based on the size of the land, different Government authorities can grant the DUAT: Up to 1000 hectares – the Provincial Government has authority, over 1000 hectares to 10,000 hectares –the Ministry of Land has authority, and above 10,000 hectares must be authorized by the Council of Ministers (The Cabinet). Once authorized local investors have 5 years to develop the land and foreigners have 3 years, failure to do so could cause partial or full repossession of the land.

There is a small application fee for the DUAT, and an annual rent of $1/ha for commercial farmers. The DUAT provides land use rights for 50 years and is renewable for another 49 years. Currently a study is underway looking into improving the land rent collection system and reviewing the current tax rates.

Marketing: To a great extent the Mozambican agricultural sector operates in a free market environment. All production and marketing of the industry are left to the private sector. Pricing for some of the cash crops is guided by reference prices, but there are no strong institutions to enforce these mechanisms. The country has a grain institute (ICM) that acts as a last resort buyer of maize from producers, but stock held by ICM are too small to significantly affect the market. The strategic food reserve is held in cash and that reduces disruptions to the market. Currently the government is in the process of establishing a commodity exchange market.

Land Conflicts and Management: Land disputes between commercial investors and rural communities continue to affect the development of Mozambican agricultural sector. In many cases these disputes are a result of asymmetry of information between the two parties in negotiating land deals, which result in mistrust by the community. One of the NGO's operating in the country (Techno-Serve) has developed tools that can be used during the negotiation process to reduce conflicts and help get all parties satisfied with the outcome. The tools basically ensure transparency and allow more equal sharing of benefits from the land:

i) Strategic Multi-sector Planning. This involves the creation of satellite maps that help identify the potential of an area. It enables both parties in the negotiation to understand the value of the piece of land being offered.
ii) Video documentation of the contracts/ agreements. This offsets the problem of illiteracy that is common among rural residents, and a video recording can be easily retrieved in cases of disputes. It also encourages the whole community to participate in the negotiations because the community see themselves in the video.

The tools have been tested in the field and result in a significant change in attitude of the rural community and reduce disputes between the rural community and investors. The Satellite maps cost about $300,000 for an entire district and the cost can usually be spread among various stakeholders. The Mozambican Judicial system has not been as effective in dealing with commercial and land disputes, which usually takes a long time to resolve. The use of these tools is one way to increase efficiency by unburdening the judicial system.

Trade Policy: Trade restriction such as export bans, import quotas, tariffs and indirect export restrictions are sometimes used by the government on export crops; sugar, cashew-nut and some other foods (poultry) to protect producers. These restrictions are mostly the results of lobbying from well organized producers and traders.

The Sugar Industry in Mozambique: Consists of four estates that produce about 400,000 tons of raw sugar per year. Domestic consumption is about 200,000 tons and the balance is exported—mostly to the European Union under the Everything But Arms Agreement (EBA). Refined sugar for industrial use is

both locally produced and imported. The industry is heavily protected with a reference price for raw sugar of $806/ton and a variable levy that adjusts to world prices in order to prevent commercial imports. Marketing is done through a single desk that also handles exports and imports. Smuggling is controlled by the customs with strong support from the industry and the single desk marketing system that ensures that smuggled imports are easily identified and confiscated. Direct employment is about 35,000 workers, and the industry justifies its high protection based on this high local employment.

Subsidy Program: There are no input subsidy programs currently implemented by the Government, but donor agencies such as the FAO are currently undertaking pilot programs on input subsidy to small holder farmers. The government provides support to smallholders through a program that provides grants or soft loans to farmers.

Agricultural Growth Corridors: Mozambique is developing investment corridors that are similar to SAGCOT. It has promotional corridors to facilitate investment in commercial agriculture and agribusiness in the country:

- ***Beira Growth Corridor*** is a partnership between the Mozambican government, the private sector, farmer organization and international agencies. Its major objective is to promote commercial agriculture and agribusiness within the Beira corridor. The Beira corridor has reportedly been successful, attracting 15 new investments in the past 3 years. Their success is a result of a change in focus from trying to attract large corporate investor to attracting medium-sized farms which can more easily access land and are usually more aware of the operating environment of the sector than foreign investors. This is a model that SAGCOT might consider to complement their current initiatives.
- ***ProSavanna Project*** is a tri- lateral program led by the government of Mozambique with support from Japan and Brazil, the programs main goals are to increase production and productivity and improve food security and nutrition along the Nacara Growth Corridor. The Prosavana project started about 5 years ago, but the program has not taken off due to delays in putting together a master plan for the project amid protests from local and international NGOs. The original idea was to consolidate the communal land and establish large commercial farms, but severe NGO criticism is likely to force a change in focus to a more participatory model for small holder farmers. However the fate of the program is still unclear.

Financing Agriculture: GAPI is a development finance organization that provides loans to agriculture entrepreneurs. Funds are partly provided by the government and also by donors, and the program is managed by a private company. GAPI has managed to run one of the most successful agriculture lending models in the country. It has developed a model that requires loans to be attached to a comprehensive bundle of services offering technical assistance and institutional strengthening to the borrower. The institution becomes a temporary share holder during the take off- stage of the business. A similar program does not seem to operate in Tanzania and should be considered.

Comparison of Tanzania and Mozambique business Environment

The corporate income tax rate for agriculture production is 10% compared to the 32% standard rate, while agro-processing is taxed at the standard rate. Tanzania applies the standard rate of 30% for all sectors. Mozambique is currently reviewing its incentive package and is likely to extend the corporate income incentive to agro- processing industries. The VAT charged on services, imports and inputs is 17% in Mozambique compared to the 18% in Tanzania. The withholding Tax on dividends is 10% in Tanzania compared to 20% in Mozambique. The employer contribution to pension is 4% of wages in Mozambique and 10% in Tanzania. Diesel Prices were lower in Mozambique than Tanzania while petrol prices were higher in Mozambique. Agricultural land taxes are low in both countries. Mozambique enforces strict exchange control mechanisms while for Tanzania the 1997 Investment Act guarantees unconditional transferability through any authorized dealer in freely convertible currency.

Agriculture Business Environment for Tanzania and Mozambique Compared.

	Tanzania	Mozambique
Corporate Income Tax Rate – standard rate	30%	32%
Corporate Income Tax Rate – farming	30%	10%
Corporate Income Tax Rate – Agro-processing	30%	32%
VAT	18%	17%
Losses Carried Forward (years)	Unlimited	
Accelerated Depreciation – Land Improvements (per year)	100%	
Accelerated Depreciation – Capital Equipment (per year)[1]	Varies	
Land Taxes ($/ha)	0.4 [2]	1
Withholding Tax – Dividends	10%	20%
Crop Produce Tax – on value of production[3]	5%	
Local Tax – Service Levy on turnover	0.03%	
Capital Gains Tax	0%	0%[4]
Transfer Fee on Land and Buildings	10%	n/a
Employee Pension (Corporate Share of Wages)	10%	4%
Skills Development Levy	5%	n/a
Electricity Rates from Grid ($/KWH)	.24	
Petrol Costs ($/litre)[5]	.80	.95
Diesel Costs ($/litre)	.87	.73
Interest Rate in Local Currency		
Time Required to Register Corporation (days)	26	21
Corporate License Fee (USD per year)		
Present of exchange controls[6]	No	Yes

Source: KPMG and PWC documents and interviews.

[1]Tanzania allows 50% reduction in first year and normal depreciation rates in subsequent years.

[2] In Tanzania Land rent is differentiated by location $0.4- rural areas and $5.75- urban areas. These rents were reviewed on financial year 2015/16 effective 1st July 2015, the rate were reduced from the previous $5.75 for rural areas and $11.51 for urban areas

[3]For Tanzania, this is the crop produce levy

[4] Capital gains are incorporated in the taxable business income

[5] Pump prices in Maputo and Dar es Salaam during tour

[6] The Mozambique Central Bank controls all transfers of direct investment and inward and outward payments

Meetings of the Study Team

Institution	Contact person
MSU : *Agriculture and Food Security Project*	>Rafael Uaiene
MIC/DASP : *Ministry of Industry and Commerce /Directorate of Private Sector Support*	>Osman Nala >Teofilo Chau >Ascensao Machel >Jeremias Aderito
MIC/IPEME: *Ministry of Industry and Commerce/ Institute of Small and Medium Enterprises.*	>Adriano Chamusso (Director) >Eleuterio Mabjaia (Satitistics and Studies Director)
Banco Terra (BTM): *Rural/ Commercial Bank in Mozambique*	>Jose Jeje (deputy director of agribusiness) >Wigle Vondeling (Agro-Finance Director)
GAPI : *Promotion of Small Industries.*	>Moises Inguane (Director)
BCI: *Commercial and Industrial Bank.*	>Barnabé Zandamela (Coordinator of Agr. Desk) >Boaventura Tuzine (Director) >Maria Silva >Anesio Guambe
Centre for Policy Analysis	>Emilio Tostao
KPMG	> Celso Tamele (Senior Consultant Advisory)
PwC	>Manuel Carrilho Dias (Advisory Leader) > Mateus Chale (Ass. Manager Clients and Marketing Dev.)
MITADER-DINAT: *Ministry of Land and Rural Development- National Directorate of Land*	>Simao Joaquim (National Director)
MASA/DE: *Ministry of Agriculture and Food Security/ Directorate of Economics*	>Aurelio Junior (Head of Department of Statistics)
CEPAGRI: *Centre for Promotion of Agriculture.*	>Hélio Neves (Head of Analysis and Information Department)
CPI: Investment Promotion Centre	>Lourenco Sambo (Director General of CPI) >Denise Amad (Business Developer) >Eugenio Dombo (Project Mgt. Service)
USAID -SPEED	>Luca Crudeli (Director)
BAGCP: *Beira Agricultural Growth Corridor*	> Emerson Zhou (Executive Director)
APAMO: *Association of Sugar Producers* DNA: *National Sugar Distributors*	>Joao Jeque (Executive Director) > Filipe Raposo (Director General)
AGRA- *Alliance for Green Revolution Africa*	Paulo Mole (Country Head)
TECHNOSERVE	>Jake Walter

Gender Effects on Agricultural Productivity, Marketing and Incomes: Evidence from Maize Farmers in Southern Tanzania

Don Mitchell, Senior Advisor USAID SERA Policy Project

January 31, 2016 Draft

Maize is grown by an estimated 80% of farmers in Tanzania and about 20% of those are by households headed by women. Most of these women are widowed or divorced and are disadvantaged compared to men headed households with respect to knowledge of production practices, land holdings, use of improved inputs, crop yields, and prices received for marketed maize. Better understanding of these women maize farmers and their characteristics and endowments could help Government, NGOs and donors to provide better services such as extension, access to inputs and information with the objective of raising incomes and reducing poverty of women maize farmers. In an effort to better understand these women maize farmers, the USAID-funded Tanzania SERA Policy Project and the International Finance Corporation of the World Bank group engaged TNS Social Research to survey 600 men and 600 women maize farmers in four regions of the southern highland maize producing area of Tanzania. The results of that survey are presented in this report along with recommendations of how to support women maize farmers through better delivery of services. The findings may have implications for women farmers producing other crops in Tanzania and for women farmers throughout the region.

Baffes (2009) reported the existence of a large productivity gap between male and female cotton growers in Uganda, thus highlighting the importance of gender in understanding productivity. Baffes and Maratou-Kolias (2013) undertook a subsequent two round survey in 2009 and 2010 and found that female cotton growers had smaller plots with lower quality soils and less secure land tenure arrangements than male cotton farmers and received slightly lower prices. Their survey included 491 households in 2009 and 460 households in 2010 equally divided between male and female cotton growing households. The average age of female headed households in the survey was 51 for females and 45 for males. The proportion of female headed households who finished primary school was 22% for females and 51% for males. Female-headed households were smaller than men-headed households (6 versus 7 persons, respectively), and male-headed households had 23% and 26% higher yields than female-headed households in 2009 and 2010, respectively.

Additional studies were undertaken on the survey of Ugandan cotton farmers by Zhang (2010) and Vasilaky (2013) to quantify the reasons for the productivity gap. Zhang examined the impact of land characteristics on cotton yields and found that soil quality, soil type, plot size, land tenure and the way land was acquired (inheritance, gift, or through customary rights) affected yields. Vasilaky using data from the survey examined the impact of social network-based training compared to conventional extension training and found that social network-based training had a significant impact on increasing yields of the poorest subsistence farmers, which included most female farmers, whereas conventional extension training favoured larger farmers with higher productivity.

The reasons for the lower cotton yields by women-headed households in Uganda were attributed to four differences: human capital, access to credit, land characteristics, and labor availability. Human capital includes education and knowledge of cultivation practices. Access to credit affects the ability to purchase inputs, use mechanization, and hire labor. Land characteristics (size, quality, and

ownership) affect yields and labor availability, both family and hired, would affect production and possibly productivity.

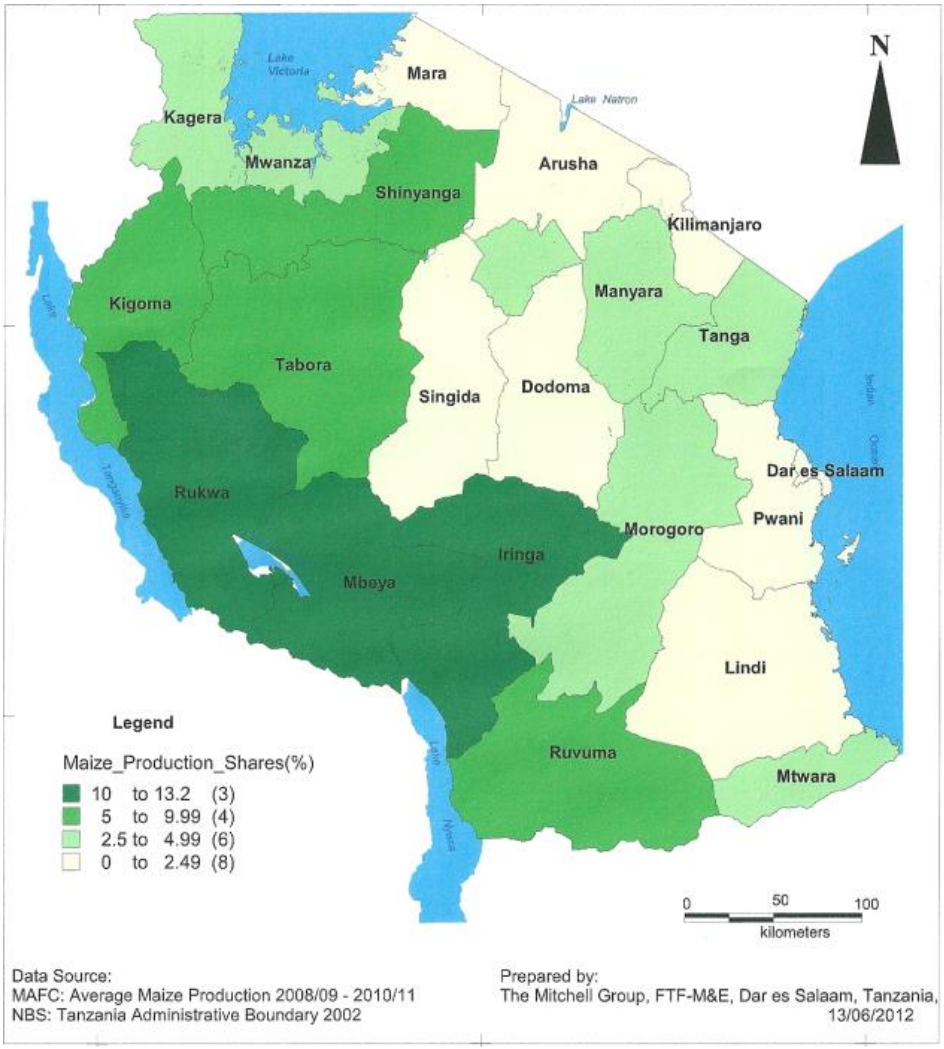
Many of the differences between male and female cotton farmers in Uganda were also found in this study of male and female maize farmers in Tanzania, with female farmers having less land, using less inputs, and having lower yields. Tanzanian female maize farmers were also found to receive significantly lower prices compared to male maize farmers in contrast to the small differences found in the Uganda study and this important difference will be explored in this study. On average, male cotton farmers in Uganda earned almost twice as much as female cotton farmers in the 2009 and 2010 survey, with most of the difference due to plot size and yields. However, female cotton farmers also received 5% lower prices than male cotton farmers and this price gap was consistent across years and regions. Males were more knowledgeable of the price prior to selling, were more likely to know the buyer prior to selling, and were more likely to arrange the sale in advance. The study of Uganda cotton farmers concluded that two policy interventions that were likely to enhance the welfare of women cotton farmers were to enhance the information dissemination channels that reach females and strengthening property rights.

Survey of Maize Farmers

A survey of maize farmers in the main producing regions of the southern highlands of Tanzania was conducted in 2015 to compare male and female maize farmers and identify differences that could be addressed through policy interventions. A total of 1,219 maize farmers were surveyed in two rounds, the first in July during harvest in Mbeya and Rukwa regions, and the second in Iringa and Ruvuma regions during October. The regions were selected to reflect those well connected to the national markets by transportation (Iringa and Mbeya) and those more remote without good access to national markets (Rukwa and Ruvuma). The survey in July included 613 maize farmers, of which 314 were male and 299 were female, and the survey in October was of 606 maize farmers, of which 314 were male and 292 were female. Maize producing districts were selected randomly in each region and two or three wards were randomly selected to survey within each district. Local leaders were engaged to identify concentrations of maize producing households and a random procedure was used to select households to be surveyed. In addition to the household surveys, key informants were interviewed to gain an understanding of the overall situation and focus groups were conducted to refine the questionnaires and obtain qualitative information. The study considered female-headed households as those which were run and represented by a widowed, divorced, or single woman without a husband, father, or male relative involved in the routine day-to-day activities of the household. Male-headed households were those where a husband was present and was the final decision maker on the important issues of the household. Survey results are presented for each region and a weighted average based on the number of households surveyed in each region is presented.

The four regions selected for the survey are located in the main maize producing regions of the southern highlands of Tanzania and account for approximately 50% of national production (Figure 1). Iringa and Mbeya are better served by roads to urban markets in Tanzania and export markets in Kenya while Rukwa and Ruvuma are less well connected by roads. The average maize prices during 2015 harvest were about 60% higher in Iringa and Mbeya, than in Rukwa and Ruvuma and that would affect the profitability and use of some inputs such as improved seeds and fertilizer. Consequently, input use and yields are expected to be lower in Rukwa and Ruvuma than in Iringa and Mbeya.

Figure 1. Maize producing regions of Tanzania and production share.



Demographic Characteristics and Endowments

The characteristics of households obtained from the surveys are shown in Table 1 along with the number of households surveyed in each region. Female headed households were on average 48 years old compared to 42 years olds for male headed households. Seventy-one percent of male maize farmers had completed primary education compared to 53 percent of women. Educational attainment was similar for all regions except Rukwa where the percentage of men and women maize farmers completing primary education was substantially lower. Only 7 percent of men on average had finished secondary education compared to 4 percent of women but there was considerable disparity between regions and in Rukwa a larger percentage of females completed secondary education than males. Ninety percent of male farmers were married as compared to only 2 percent of female maize farmers and these characteristics were similar in all regions. Sixty-nine percent of women maize farmers were widowed compared to 3 percent of male maize farmers. A slightly higher percentage of female than male maize farmers reported agriculture as their primary occupation while business was reported as the primary occupation of more male and female maize farmers in Iringa which may reflect better off-farm opportunities in this region (data incomplete and to be added).

Table 1: Demographic characteristics of male and female maize farmers.

	------ Total ------		---- Iringa----		----- Mbeya-----		------Rukwa-----		----Ruvuma----	
	Male	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*
Number of households surveyed										
	628	591	162	140	158	153	156	146	152	152
Demographic characteristics										
Age of household	42	48	41	49	43	48	40	46	43	47
Primary education (%)	71	53	73	49	74	50	59	51	76	62
Secondary education (%)	7	4	12	3	4	2	9	3	4	8
Married (%)	90	2	88	3	89	1	89	3	94	1
Widowed (%)	3	69	3	72	1	72	6	69	1	62
Primary Occupation										
Agriculture (%)	93	96	81	91	97	94	98	99	98	99
Business (%)			10	7					1	0

Notes: Age of household is the age of the household head. Primary and Secondary education is the percent of the household heads that have completed primary and secondary education. Marital status is the percent of households heads who are in each category, and primary occupation is the percent of household heads who list agriculture and business and their primary occupations.

Land quality, size, and tenure arrangements were found to be important determinants of productivity for Ugandan cotton farmer, and many of the differences found among male and female cotton growers in Uganda were also found among male and female maize farmers in Tanzania. Female headed households had only 60% as much land as male headed households, had less land planted to maize, and slightly fewer female maize farmers had land titles compared to male maize farmers. Based on these characteristics and the findings from the Uganda study, lower productivity of female maize farmers would be expected compared to male maize farmers.

Table 2: Land holding of male and female maize farmers.

	------ Total ------		---- Iringa----		----- Mbeya-----		------Rukwa-----		----Ruvuma----	
	Male	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*
Land characteristics										
Land Size (acres)	3.5	2.1	3.3	2.2	1.9	1.5	2.9	2.0	5.8	2.8
Land Planted to Maize (acres)	1.9	1.4	2.3	1.8	1.0	0.9	1.7	1.3	2.7	1.7
Land owned (acres)	3.5	2.2	3.3	2.2	1.9	1.5	2.9	2.2	5.8	2.8
Land rented (acres)			0.5	0.2			1.3	1.2	0.2	0.2
Land Title Deed (%)	12.5	11.3	19	12	16	14	5	7	10	12

Notes:

Input Use

Input use among Tanzanian male and female maize farmers is shown in Table 3, and female maize farmers used less improved inputs of all types. In seed, for example, a larger percentage of female farmers used local varieties and a smaller percentage used improved OPVs or hybrids. A smaller percentage of female farmers used urea and DAP than male farmers and those female farmers who

used fertilizer used less fertilizer per acre and had lower fertilizer costs per acre. More female farmers used a hand hoe for land preparation and a smaller percentage of female farmer used animal traction than male farmers and almost none of the female farmers used tractors for land preparation while some male farmers used tractors. Almost all maize farmers in the survey hired labor, but female farmers had lower labor costs per acre which suggests that they hired less labor than male farmers. Female maize farmers were more likely to intercrop than male maize farmers which would also contribute to lower yields, and lower use of nearly all inputs should result in lower yields for female farmers. Overall the survey results are consistent with the conclusion that female maize farmers have more limited resources than male farmers and that is reflected in lower input use.

Table 3: Input use of male and female maize farmers.

	------ Total ------		---- Iringa----		----- Mbeya-----		------Rukwa-----		----Ruvuma----	
	Male	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*
Seed Use										
Local Varieties (%)	62	76	69	78	49	67	61	80	68	81
Improved OPV (%)						10	5	9	3	
Hybrids (%)						40	30	29	15	
Fertilizer Use										
Urea (%)	41	35	57	52	45	45	14	5	49	38
DAP (%)	18	11	42	33	16	11	10	1	5	1
Urea (kg/acre)			34	37					54	46
DAP (kg/acre)			37	36					29	50
Fertilizer Cost (per acre)			143	134					73	62
Hired Labor										
Hired Labor Cost (per acre)			228	156					293	247
Land Preparation										
Hand Hoe (%)	76	82	62	65	91	95	56	66	98	99
Animal Traction (%)	20	16	30	26	6	5	41	33	0	1
Tractor (%)	3	0	8	1	2	0	0	0	2	0
Irrigation										
Use Irrigation (%)			4	6					1	0
Cropping Pattern										
Intercropped (%)			57	46					66	59
Pure Stand (%)			42	53					29	67

Notes: Fertilizer Costs and Hired Labor Costs are in thousands of Tanzanian Shillings.

Credit

Credit was available to smallholder farmers from a range of institutions and programs in the survey region. Commercial banks accounted for less than 10% of loans to farmers surveyed and there was little difference between male and female farmers. Informal financial service providers such as the Village Community Banks (VICOBA) and Savings and Credit Cooperatives (SACCOs) offered loans and SACCOs were more popular with women while men were more likely to borrow from a VICOBAs. There

were also donor program and non-profits, such as One Acre Fund, that offered inputs and training to smallholders, and the Alliance for Green Revolution (AGRA) which offered financing through the Innovative Financing Program and Farmer Organization Support Center for Africa (FOSCA). The Agriculture Inputs Credit Fund established by government was another agricultural finance facility available to farmers. However, formal and informal groups accounted for the largest share of loans to farmers and the survey indicated that those farmers that received credit most often obtained it through religious groups. Groups were popular among female farmers (accounting for 40% of lending) while male farmers received 26% of their credit from groups, but were also more diversified in their borrowing than female farmers. There were also differences between regions, with Iringa and Mbeya regions having more diversified credit sources than the relatively more remote regions of Rukwa and Ruvuma.

The primary use of credit was for agriculture, with 44% of male farmers and 38% of female farmers listing agriculture as the purpose of the credit. However, male farmers borrowed more often for business (34%) than female farmers (12%) while both male and female farmers borrowed for household needs and school fees. Regional differences were apparent, with male farmers in the more remote regions of Rukwa and Ruvuma more likely to borrow for agriculture than those in Iringa or Mbeya where borrowing for agriculture was a smaller percentage of borrowing and borrowing for business was a larger percentage. About one-third of male and female farmers reported no need for credit and both male and female farmers in Mbeya gave this as the main reason for not seeking credit while a much smaller percentage of farmers in Rukwa and Ruvuma gave this reason for not applying for credit. Lack of collateral accounted for 17% of the reasons given for not seeking credit for male farmers and 22% for female farmers. The unavailability of credit services was the most common reason given by both male and female farmers in Rukwa and Ruvuma for not seeking credit but was less commonly reported in Iringa and Mbeya.

Table 4: Access to Credit.

	------ Total ------		**---- Iringa----**		**----- Mbeya-----**		**------Rukwa-----**		**----Ruvuma----**	
	Male	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*
Source of Credit										
Commercial Banks (%)	9	8	5	8	10	0	20	25	0	0
Groups (%)	26	40	17	28	20	50	40	50	27	33
SACCO (%)	12	23	16	25	10	25	0	25	21	17
VICOBA (%)	15	4	28	8					32	8
Money Lender (%)	7	7	2	3	20	25	0	0	5	0
Purpose of Credit										
Agriculture (%)	44	38	23	43	30	50	60	25	63	33
Business (%)	34	12	15	18	40	0	20	25	16	8
Household Needs (%)			15	18					16	8
School Fees (%)			5	25	30	25			0	11
Reasons for Not Seeking Credit										
No Need (%)	36	33	36	34	61	54	16	13	21	28
No Collateral (%)	17	22	21	38	2	5	25	26	20	20
Service Unavailable (%)	27	20	16	11	6	3	42	35	46	30
Outstanding Loan (%)	10	11	5	4	12	17	20	20	4	3

Notes:

Maize Production and Yields

The lower land holdings, reduced input use, and more limited access to credit and information were expected to contribute to lower yields by female maize farmers and these expectations were confirmed. The survey found that female maize farmers had average yields that were only 73% of maize yields of male farmers in the four regions surveyed. This varied from 56% in Rukwa to 82% in Ruvuma. Maize production of female farmers average only 54% of male maize famers across the four regions as a result of both less land planted to maize and lower yields. The share of yields of female farmers compared to male farmers varied from 43% in Rukwa to 58% in Iringa

Table 5: Maize Yields, Land Planted to Maize and Implied Production.

	------ Total ------		---- Iringa----		----- Mbeya-----		------Rukwa-----		----Ruvuma----	
	Male	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*
Yields (kg/acre)	546	401	706	521	406	288	389	219	694	567
Land Planted to Maize (acres)	1.9	1.4	2.3	1.8	1.0	0.9	1.7	1.3	2.7	1.7
Implied Production (kg)	1,130	614	1,624	938	406	259	661	285	1874	964
Female Yield(% of Male)		73		74		719		56		82
Female Land Planted to Maize (% of Male)		74		78		90		77		63
Female Prod (% of Male)		54		58		64		43		51

Notes: Production was note reported in the survey and was calculated from survey reports for land planted to maize and yields.

Sources of Information

Female maize farmers also had less access to outside information and relied more on other farmers for information than did male farmers. Radio was the second most common sources of information on production and market for both male and female farmers followed by mobile phones (Table 5), but a lower percentage of female farmers received information from these sources than male farmers. Female farmers in more remote Ruvuma reported receiving information from Input Dealers, NGOs and Government/Farmer Organizations less often than female farmers in Iringa and less often than male farmers in Ruvuma.

The survey responses on marketing reflect the different periods of the survey with Mbey and Rukwa regions being surveyed in July during harvest and Iringa and Ruvuma regions being surveyed in October after harvest. Reponses showed that farmers had little knowledge of prices or buyers during harvest but acquired this knowledge prior to marketing. More than half of male farmers reported having prior knowledge of prices before marketing and almost half of the female farmers reported having prior knowledge of prices. However, few male or female farmers surveyed during July reported having prior knowledge of prices or knowledge of the buyer. Three-quarters of the male farmers reported negotiating price compared to 70% and 93% of women in Iringa and Ruvuma, respectively.

Table 6: Sources of Production and Market Information and Knowledge of Prices.

	------ Total ------		---- Iringa----		----- Mbeya-----		------Rukwa-----		----Ruvuma----	
	Male	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*
Source of Information										
Other Farmers (%)			49	60					41	52
Radio (%)			44	40					51	38
Mobile Phones (%)			27	21					28	28
Input Dealers (%)			17	13					8	3
NGOs (%)			10	16					9	3
Government/Farmer Organizations (%)			9	12					5	3
Preferred Source of Information										
Radio (%)			76	78					70	70
Face to Face (%)			48	47					44	44
Mobile Phone (%)			40	24					38	38
Farm Visits (%)			31	39					34	34
Group Discussions (%)			23	24					7	7
Field Days (%)			15	22					7	7
Newspapers (%)			15	6					20	20
Group Meetings (%)			15	19					6	6
Knowledge of Buyer and Prices										
Advance Knowledge of Price (%)			69	52	10	11	5	4	58	44
Knows Buyer (%)			52	61	4	5	3	2	32	54
Negotiated Price (%)			75	70	13	14	8	6	77	93
Arranged Sale in Advance (%)			60	55	10	7	3	3	42	44

Notes:

Marketing Maize

On average female farmers in Iringa reporting received 87% of the prices received by male farmers and female farmers in Ruvuma reported received 58% of the prices received by their male counterparts. Female farmers sold only 59% as large of volumes as male farmers in Iringa and 44% in Ruvuma. The combination of lower volumes sold and lower prices resulted in female maize farmers in Iringa receiving 65% as much revenue as male maize farmers and female farmers in Ruvuma received only 25% of the sales revenue received by their male counterparts. Many factors contributed to these substantial differences and the low prices received by female farmers in Ruvuma were certainly a major contributor but lower volumes accounted for an even larger share of the decline in female sales revenue compared to their male counterparts. Higher sales volumes of male farmers in Ruvuma offset lower prices and resulted in sales that were higher than for male farmers in Iringa.

Access to market information may partially account for lower prices received by female maize farmers compared to their male counterparts, but other factors such the type of buyer, the quality of the maize and the volumes sold may also influence the prices received. Female farmers reported lower quality

for the maize sold and were more likely to sell to consumers than traders than male farmers. Perhaps this contributed to lower prices received by female farmers if these sales were less commercially oriented or provided as partial payment for services received. Since Mbeya and Rukwa regions were surveyed in July during harvest, few households in those regions responded to survey questions on marketing. However, the survey in Iringa and Ruvuma occurred one to two months after harvest and the response rate to the marketing questions was good. Other attributes of maize marketing are reported in Table 6.

Table 7: Maize Marketing, Prices and Sales.

	------ Total ------		---- Iringa----		----- Mbeya-----		------Rukwa-----		----Ruvuma----	
	Male	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*
Maize Prices										
Prices Received (TZS/kg)	502	347	419	366					571	333
Female Share (%)		69		87						58
Quality of Maize Marketed										
High (%)			30	26					44	36
Medium (%)			65	64					42	50
Low (%)			5	10					25	14
Volume Marketed										
Per Acre (kg)	307	244	268	255					337	237
Per HH (kg)	586	346	616	459					910	404
Female Share (%)		59		74						44
Buyer										
Small Trader (%)	64	60	64	55					65	63
Consumer (%)	18	25	21	24					15	27
Middle Man (%)	7	8	10	11					4	6
Large Trader (%)	3	2	0	3					6	2
Sales										
Marketed Maize (Th TZS)	294	120	258	168					520	135
Female Share (%)		41		65						26

Notes:

Conclusion

A survey of approximately 1,200 maize farmers in the southern highland maize producing area of Tanzania was conducted in July and October of 2015. The survey targeted an equal number of male and female farmers to allow an evaluation of the impact of gender on productivity and marketing. The results showed that female headed households are disadvantaged in resource endowments, inputs used, and access to credit compared to their male counterparts. On average they had only 60% as much land as male farmers and planted 74% as many acres to maize. They had lower input use and were more likely to use local seed varieties rather than improved OPVs or hybrids than male farmers. Fertilizer use was about 75% of that of their male counterparts and they were less likely to apply for credit because they did not have collateral. They had less education and less access to information from those other than farmers. Their yields were approximately three-quarters of male maize farmers. They produced less maize, sold less maize and received lower prices for the maize they sold. On average they received about 70% as much for the maize they sold as male farmers and the combination of lower land planted to maize, lower yields, and lower prices meant that their revenue from the sale of maize was about 40% of that of male farmers. Erasing these differences will be nearly impossible, but there are policy actions that can help to reduce the differences and raise yields and revenue from maize. More secure land rights would make it possible to benefit from investments in the land without concern that the land use rights are fragile and investments are risky. Social-network based training has been successful in raising yields of low-income farmers in other countries and may help raise female maize yields in Tanzania. Better market information systems could increase bargaining power of female maize farmers who now receive most of their information from other farmers. Finally, the findings of this survey of male and female maize farmers may provide insights into the gender difference that exist in other crops in Tanzania and the region.

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REPORT ON THE SENIOR OFFICIAL TECHNICAL WORKSHOP FOR REVIEW OF THE NATIONAL INVESTMENT POLICY (1996) AND INVESTMENT ACT (1997) - DODOMA

15TH – 20TH FEBRUARY 2016

1. Introduction:

The report represents proceedings of the workshop held in Dodoma from 15th – 20th February to review National Investment Policy 1996. The workshop was attended by Senior Officers from P.M. Office, Ministries of Infrastructure, Transport and Communication; Energy and Minerals; Agriculture, Livestock and Fisheries; Land, Housing and Human Settlement; Water and Irrigation; Natural Resources and Tourism. Other participants were from TIC, EPZA, BOT, CTI, TRA and SAGCOT Center.

The workshop was opened by Dr. Mboya, Asst. Director in the PM office responsible investments. He pointed out that the workshop is a result of recommendations from the stakeholders meeting held on 3rd November 2015 in Dar es Salaam. Its purpose is to improve the Draft Policy.

2. Presentations:

i. Overview of National Investment Policy 1996 – Girson Ntimba, Principal Economist, PM Office

He pointed out the layout and commented that it is outdated according to the current policy formulation guidelines of 2014 issued by the Cabinet Secretariat. He pointed out the need to take to account current broad goals; i.e. National Development Vision 2025, Long Term Perspective Plan 2012 -2026, Sustainable Development Goals (SDGs). In addition, there is need to address emerging business environment and investment climate challenges, linkage among investment promotion agencies, align with sectoral investment priorities and streamline investment promotion and facilitation. He also pointed current policy challenges including; inadequate coordination of investment approval processes, inadequate enabling environment for doing business and investment climate, inadequate domestic and foreign investment, low exports and value addition and inadequate infrastructure.

ii. Draft National Investment Policy 2016 – Dr. Kazungu, Consultant

He presented the layout of the draft policy indicating difference between the 1996 and the new/draft of 2016. The new areas are; Rationale for Revision, Policy Issues and Statements, Legal Framework and Monitoring and Evaluation (M&E)

2.1 Plenary Discussion and Comments

Points were raised for improvement of the draft as follows;

i. Update and add data for sectors mentioned in the document and show key statistics e.g. contribution of each sector to GDP
ii. Show on going government interventions on promotion of investments
iii. Clarify magnitude of problems in the situation analysis section
iv. Linkage among promotion agencies
v. Gaps to be addressed
vi. Access to investment capital
vii. Security and due diligence for investors

3. Incentive Management – J. Gomera, PM Office

He clarified issues of non-fiscal and fiscal incentives that there is inverse relationship between the tax rate and FDIs as such there is need of improving non fiscal incentives in order to attract more investment rather than concentrating on fiscal incentives. A study should be conducted to look deeply on benefit of fiscal incentives to establish whether investors are only attracted by tax incentives or profits.

4. Plenary Discussion on Investment Act 1997

i. It was observed that the Investment Act was for TIC and so it cannot be transformed to become a national act. Given that investment occurs across sectors, there is need to formulate an Investment Policy that will cut across all sectors and from that, an Investment Act should be formulated. Also to ease the process of servicing investors, a "ONE STOP SHOP", an autonomous investment body to carter for investment facilitation should be created. Such bodies exist in Rwanda, Egypt and Ethiopia.

ii. It was agreed that research should be conducted to get experience from best practice countries on the autonomous body.
iii. It was suggested that other Acts, such as EPZA Act, Sectoral Acts such as Mining, Oil and Gas as well as Special Economic Zones program should be amended to be aligned to the Investment Act.
iv. It was agreed issue of One Stop Shop should be crystal clear in the policy.
v. It was agreed that incentives should appear in the respective sectoral acts.

5. **Plenary Discussion on Draft National Investment Policy 2016**

General comments were as follows;

i. The consultant to review the Investment Promotion Policy 2016 and re-focus the mission, vision and objectives.
ii. Chapter 1, Introduction, is missing information on challenges for supporting investment.
iii. The area of Legal and Institution Framework should include Acts that need to be repealed and those need to be reviewed sighting specific sections.
iv. Research/study should be conducted to justify establishment of One Stop Shop.
v.

6. **Presentation on Case Study of One Stop Shop (OSS) Models**

The case study presented models in Nigeria, Ethiopia, Rwanda, Mauritius, Egypt and Cyprus.

Definition: **"One Stop Shop is an investment facilitation mechanism where relevant government agencies are brought to one location, coordinated and streamlined to provide prompt, efficient and transparent services to investors**".

Guiding Principles: OSS is guided by following key principles;

C – Convenience

E – Efficiency

S – Simplicity

S – Speed

T – Transparency

Benefits:

- Substantially reduces the cost of doing business
- Ensures FDI and Investors Tracking
- Simplifies procedural steps
- Shortens service delivery time without compromising policy objectives of various agencies.

6.1 Plenary Discussions on Case Study:

It was reported that there is more than OSS in Tanzania, in TIC and in EPZA. It was also informed that the OSS at TIC is not fully functional as some of institutions (Ministries of Labor, Industry and Trade, Lands, TRA, NEMC, TCRA) have not yet relocated officers to the OSS and even for those with officers do not have full mandate for necessary approvals.

7. Way Forward

A study should be done to justify establishment of an Investment Authority in the country. This will inform the government/cabinet on the functions and authority required to enable it to function according to the guiding principles.

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Basic Economic Principles

Don Mitchell
SERA Policy Project

Zanzibar
February 18, 2016

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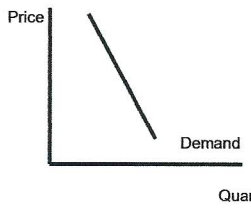
Demand



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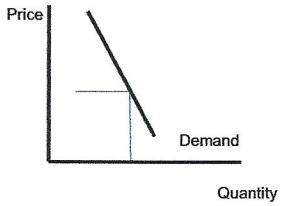

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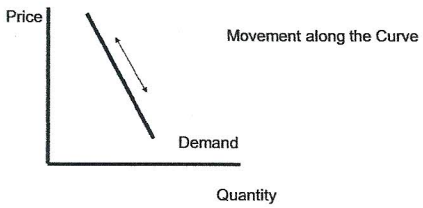

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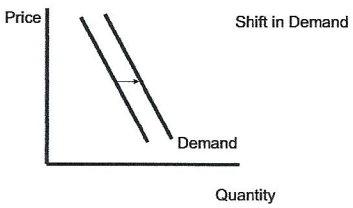

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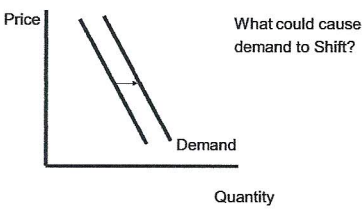

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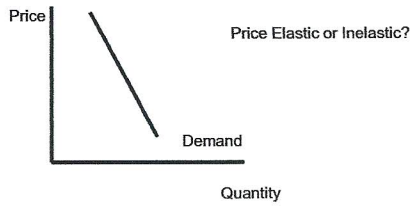
Price Elasticity of Demand



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Price Elasticity of Demand

E_d = % Change in Quantity / % Change in Price

Example: Price increases 10% and quantity demanded declines 5% then E_d is -5/10 = -0.5

If E_d = 0 to -1 Inelastic

If E_d < -1 then Elastic

If E_d = -1 then Unitary Elasticity

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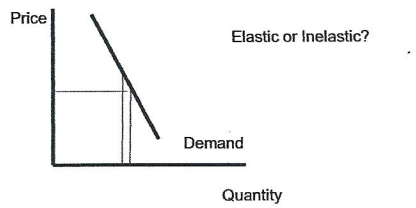
Price Elasticity of Demand



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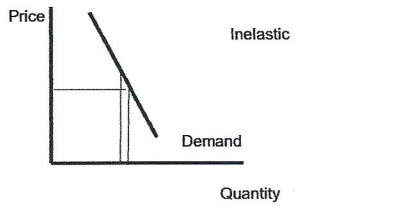
Price Elasticity of Demand



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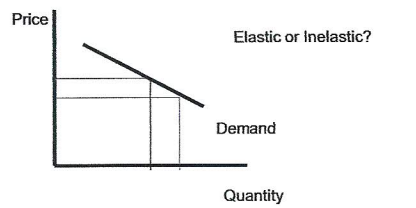

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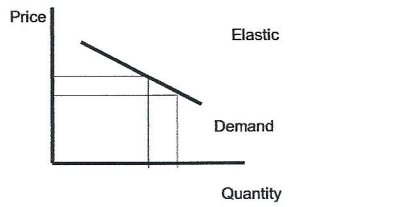
Price Elasticity of Demand



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Is the demand for rice price elastic or inelastic?

13

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Is the demand for rice price elastic or inelastic?

If price fell 10%, how much would quantity demanded increase?

14

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Is the demand for rice price elastic or inelastic?

E_d= 4/-10= -.4

Probably inelastic - approximately -0.4

if price fell 10% demand would increase about 4%

15

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Is the demand for chillies price elastic or inelastic?

Probably very inelastic – perhaps -0.10

if price fell 10% consumption would increase about 1%

16

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What if

E_d = 0 (i.e. 0 / % change P)

E_d = infinity (divide by zero)

Remember

E_d = % Change in Quantity / % Change in Price

17

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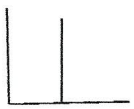
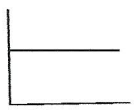
What if

E_d = 0
Perfectly Inelastic



E_d = infinity (divide by zero)
Perfectly Elastic



18

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Income Elasticity of Demand

Income Elasticity of Demand = % Change in Quantity Demanded / % Change in Income

If income increased 10% how much would quantity demand increase?

Most food items are income inelastic, but a few could be elastic.

19

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Example of Income Inelastic Demand?

Rice

If income increased by 10% how much would demand increase?

20

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Example of Income Inelastic Demand?

Rice

If income increased by 10% how much would demand increase?

E_I = 4/10 = .4

If E_I is 0 to 1 then inelastic
If E_I is >1 then elastic

21

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Example of Income Elastic Demand?

Fish and Meat?
Dairy Products?

If income rose 10% maybe meat or fish consumption would rise more than 10%

22

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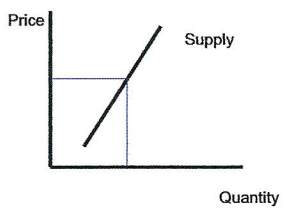
Supply



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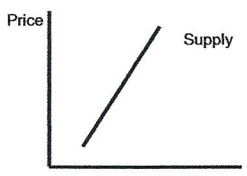
Supply



Shift vs Movement
Elastic or Inelastic?

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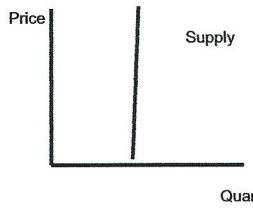
Supply



When would Supply be Inelastic?

25

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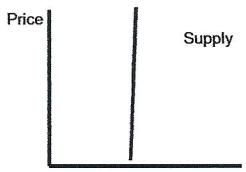
Supply



When would Supply be Inelastic?
Crop Production – can't change much after harvest

26

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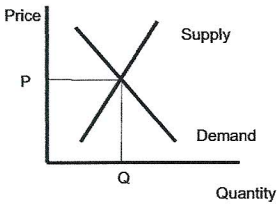
Demand and Supply



27

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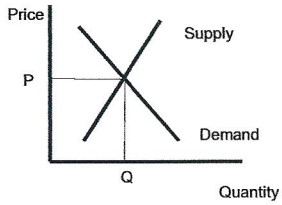
Demand and Supply



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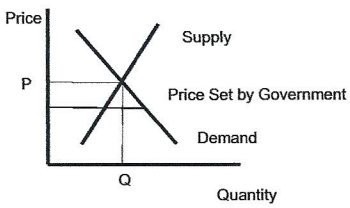
Price Controls



29

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Exchange Rate

What is it? – the amount of one currency to buy/sell another.

The TZS/USD Exchange Rate is about 2,180TZS/$1.0

The TZS has been depreciating against the USD. (means it takes more TZS to buy $1.0)

Suppose it appreciated? Then it would take less TZS to buy $1.0 (i.e. 2,000 TZS/$1.0)

30

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Why do we care about Exchange Rates?

Because everything we export or import is affected by the exchange rate and most things we don't.

- If we import petroleum and the TZS depreciates, the petroleum costs more (because it is prices in USD).
- If we export cloves and the TZS depreciates, the cloves cost less for the importer and Zanzibar becomes more competitive.
- Even things we don't import or export can be affected by prices changes of imports.

31

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How are exchange rates determined?

Floating – Determined by Market (Demand and Supply)

Zambia is very dependent on copper exports and copper prices have declined which caused export earnings to fall and exchange rate to depreciate.

Why? Because the copper importers need to buy less Zambian currency to pay for the copper. So the demand for Zambian currency fell and the currency fell (depreciated).

Generally – if exports are strong so will be the currency.

32

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How are exchange rates determined?

Controlled – Determined by Government or Partially Determined by Government

China has "pegged" its exchange rate to the USD in the past and now "manages" its exchange rate.

Why? Because that makes their exports cheaper and allows their economy to grow faster.

We say their currency is undervalued—it would appreciate if allowed to float.

33

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How is the TZS/$ exchange rates determined?

Because Zanzibar shares its currency with the mainland, the exchange rate is mostly determined by the economic conditions on the mainland and in other countries.

The U.S. $ has appreciated sharply and this largely explains the depreciation of the TZS and this also applies to many other countries in the region.

Other factors could also contribute. Foreign exports have weakened because of lower commodity prices and investment in oil and gas may have decreased.

34

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How are floating exchange rates determined?

Economic conditions in both countries.

Economic Growth, Inflation, and Interest Rates.

The United States has a strong economy now and investors want to buy dollars to invest in the U.S. So as they buy dollars, they drive up the exchange rate (meaning they have to pay more for each $ and that causes their currency to depreciate compared to the $).

35

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What is inflation?

Rise in prices caused by increase in money supply.

Central Bank increases money supply by printing more currency or changing commercial banking regulations.

Consumers have more money but the supply of goods has not increased and that pushes up prices.

Impact depends. If wages go up by same rate, smaller impact. But some always left out (retirees).

Borrowers usually gain because loans are not usually adjusted for inflation.

36

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What are "real" prices?

Impact of inflation has been removed by dividing by an index of inflation.

Consumer Price Index – measures the prices of final consumer goods using consumption weights and prices.

But be careful. If you are trying to get real food prices, you can't use the consumer price index. Why?

37

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What is not inflation?

Rise in prices due to changes in demand or supply.

Example: Drought causes food production to be lower and food prices rise.

Not inflation. Just a change in supply that causes prices to rise.

38

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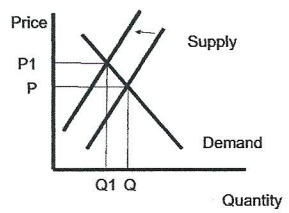
Impact of Drought



39

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Food Prices in Zanzibar

Imported or Domestically Produced?
Rice – 75% imported.
Price depends on world market.
Fruits and Vegetables – mostly locally produced.

How are they related?

40

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Substitutes or Complements?

Substitutes: Rice and Bread?
If demand for one goes up, demand for other goes down?

Complements: Bread and Butter?
If demand for one goes up, demand for other goes up?

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Food Prices in Zanzibar

Imported or Domestically Produced?
Rice – 75% imported.
Price depends on world market.
Fruits and Vegetables – mostly local produced.

How are they related?

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Food Prices in Zanzibar

Imported or Domestically Produced?

Rice – 75% imported.

Price depends on world market.

Fruits and Vegetables – mostly local produced.

How are they related? Probably substitutes.

Implication: Price of imported rice could affect price of domestically produced foods or other imports (wheat for bread).

43

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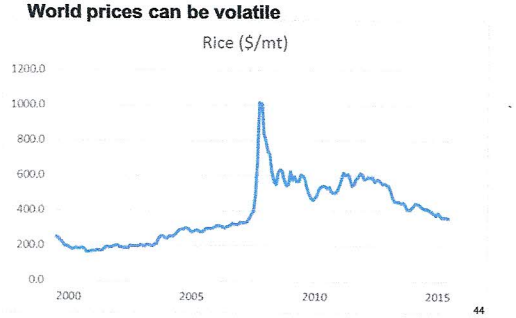
World prices can be volatile



44

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Food Price Risk

Two Sources: World Market and Domestic Production

No easy solution:

Increase domestic production

Hold a Strategic Reserve

Hold a Financial Reserve (Mozambique does that)

best solution if politically acceptable

45

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Access to Food

Depends on Food Prices and Incomes

Income:

Level and Distribution

46

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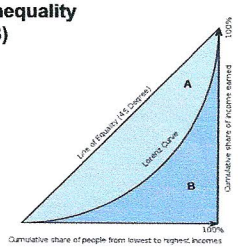
Distribution of Incomes-Gini Coefficient or Ratio

Measure of inequality
Ratio=A/(A+B)



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Per Capita GDP as a measure of income

GDP = value of all final goods and services produced in the economy

Compute as wages + profits + taxes – subsidies

or consumption + investments + government spending + exports – imports

Overstates per capita incomes which are more nearly equal to wages – taxes + subsidies

48

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GDP at current and market prices

GDP at current prices is GDP computed at the market prices of the current period. (also known as nominal GDP)

GDP at real prices computes GDP at the prices that existed in a previous period. It allows the effects of inflation to be removed and measures the increase in output of goods and services.

Note: the GDP price deflator measures prices of all goods and services whereas the CPI measures only consumer goods

49

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GNI and PPP

Gross National Income (GNI) measures all final goods and services produced by a country's citizens (includes overseas).

Purchasing Power Parity (PPP) attempts to remove the effects of different exchange rates when computing GDP (remember China pegging its currency to the USD) that distorts the value of its GDP and PPP would try to compute GDP at "equilibrium" exchange rates.

50

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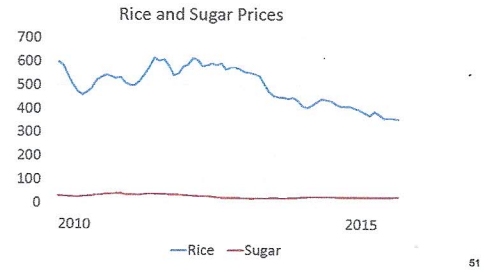
Comparing Different Types of Data



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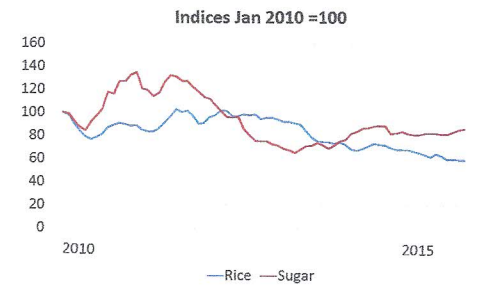

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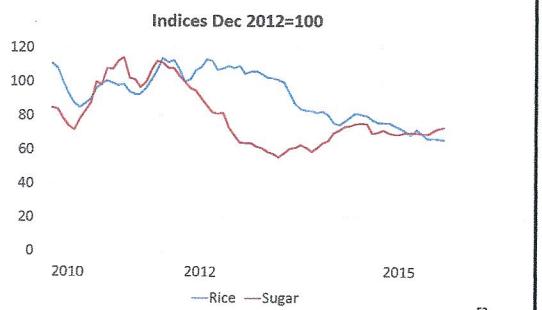

53

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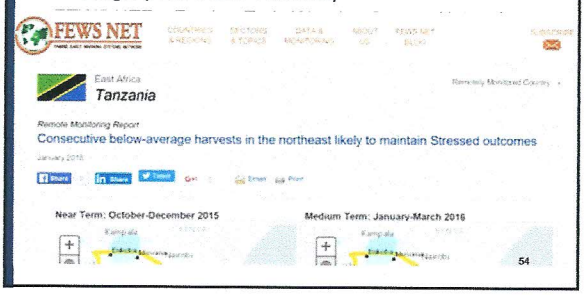
Monitoring Regional Food Production

Google (FEWS NET Tanzania)



54

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Weather, Climate, and Agriculture

Global Weather Hazards

Rainfall forecast to remain below average in southeastern Africa
February 12, 2016 to February 18, 2016

Poor distribution of rainfall leads to severe drought and flooding risks in southern Africa
February 5, 2016 to February 11, 2016

Seasonal Monitor

Rainfall remains above average in Rwanda, Burundi, Tanzania and southern Kenya
February 10, 2016

Increased rainfall in December improves production prospects in the Eastern Horn
January 20, 2016

55

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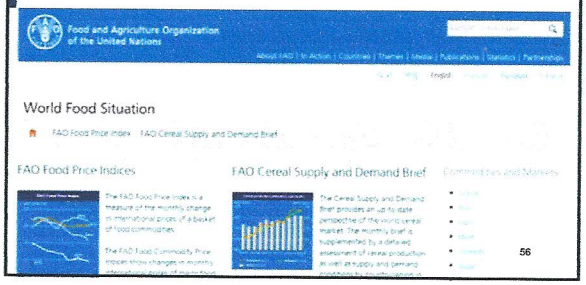
Monitoring Global Food Prices and Food Supplies
Google (FAO World Food Situation)



56

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FEED THE FUTURE
The U.S. Government's Global Hunger & Food Security Initiative



September 2015, Policy Brief No. 3

SERA Policy Brief

Food Basket Costs in Tanzania *

Food is the largest expenditure item for the typical Tanzanian household and accounts for significantly more than half of total expenditures for the poorest. Consequently, food prices and food costs are very important to consumers and to the Government of the United Republic of Tanzania (GOT) as it addresses food security concerns. Since the typical diet and food prices vary greatly across Tanzania, it is important to consider the cost of the entire food basket in each region in order to fully understand the implications for food security. The SERA Policy Project and the Economic Research Service of the U.S. Department of Agriculture worked closely with the Department of Food Security and the Department of Policy and Planning of the Ministry of Agriculture, Food Security, and Cooperatives to develop and pilot a comprehensive and systematic approach to measuring food costs. This approach is referred to as the Food Basket Methodology (FBM), and it is used to measure the monthly costs of the typical food basket.

This Policy Brief explains the Food Basket Methodology and provides estimates of the monthly food basket costs from January 2011 to July 2015 for 21 regions in Tanzania and considers the implications for food security. Food basket costs can be used to provide early warning of regional food cost increases, but they can also provide valuable insights into broader food security issues by showing how prices of individual food items affect overall food basket costs and how food prices are related within a region and between regions. This information can be used to assess the impact of a particular food price increase on food basket costs. For example, maize is the main food staple in Tanzania accounting for about 40% of total calories in the typical diet; but it accounts for only 14.5% of the cost of the typical food basket and less than 8% of the food basket cost in Dar es Salaam. Consequently, an increase in maize prices has less of an impact on food costs and food security than implied by its calorie share or market visibility. Such detailed knowledge of food basket costs can contribute to better understanding of food security in Tanzania and lead to better policy decisions and better targeting of food assistance by identifying vulnerable regions and their consumption patterns.

* This Policy Brief was prepared by Don Mitchell and Aneth Kayombo, Senior Advisor and Policy Analyst, respectively, of the SERA Policy Project. It relies heavily on the methodology and initial analysis done by Nancy Cochrane of the U.S. Department of Agriculture but extends the analysis to 21 regions and focuses on the implications for food security. Thanks are given to the National Bureau of Statistics for providing data used in the calculations and the Ministry of Agriculture, Food Security, and Cooperatives for piloting the Methodology and providing valuable insights into regional food costs. Comments should be addressed to Marialyce Mutchler, the SERA Chief of Party, at marialyce.mutchler@tzsera.com. The SERA Policy Project is a USAID- funded Feed the Future project that seeks to improve agricultural policies and develop capacity for policy analysis and advocacy in Tanzania. The project is implemented by Booz Allen Hamilton.

Food Basket Methodology

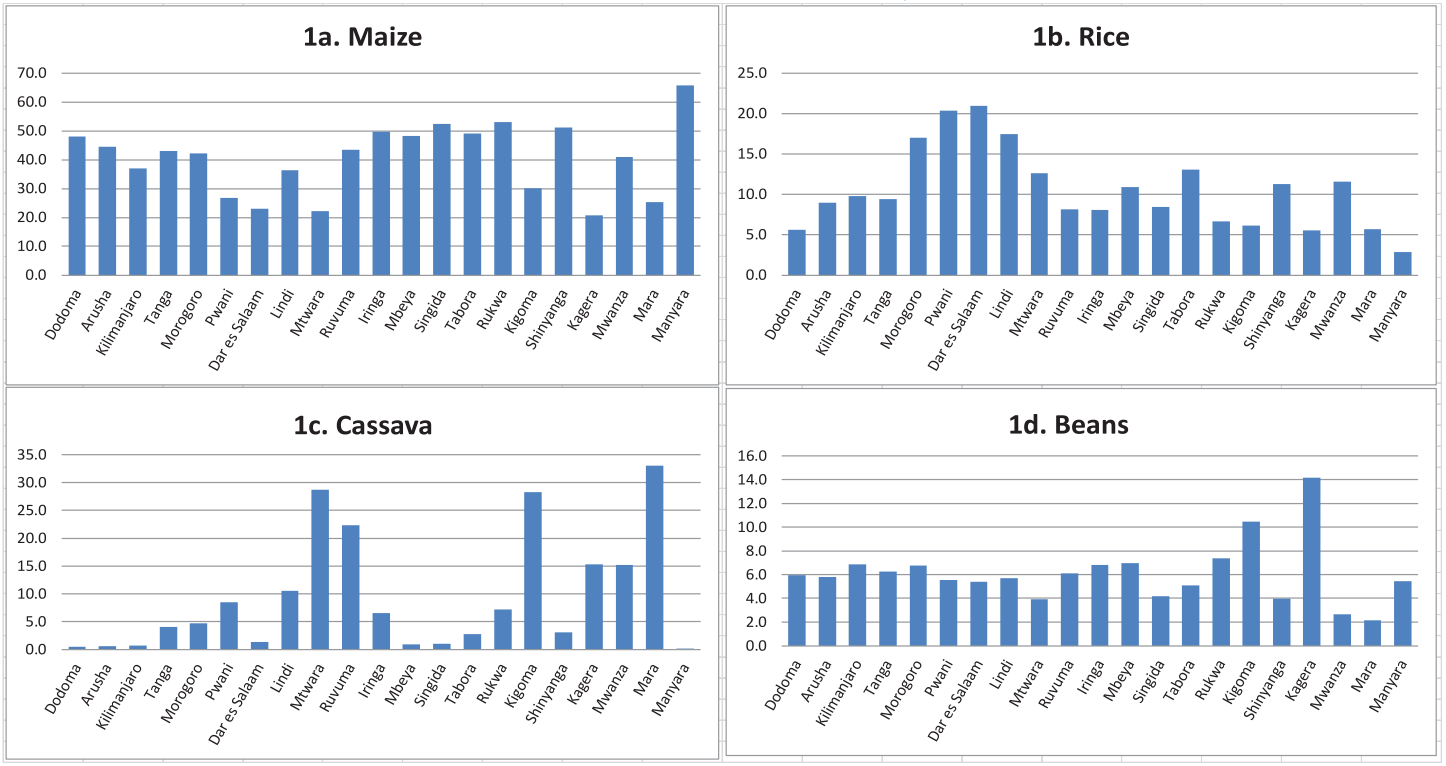
The typical food basket is comprised of a large number of food items, but relatively few items account for the bulk of the food basket's calories and costs. For the FBM, the 17 food items with the largest contribution to the total calories in the Tanzanian diet were selected to be included in the typical food basket. This was done partly due to data limitations and partly to reduce the computational burden of including a larger number of food items with small calorie shares in the food basket. These 17 food items account for an average of 88% of total calories in the typical regional food basket. The contribution of the remaining food items was estimated by scaling up the food basket to the total daily calories consumed per person per day in Tanzania.

The costs of the 17 food items in the typical food basket were computed based on monthly retail prices and per capita consumption. The retail prices for the major urban center in each region were obtained from the National Bureau of Statistics and calorie shares were obtained from the National Panel Survey 2010/2011. The calorie shares are nationally representative, but the sample sizes are not sufficient for the calorie shares to be statistically representative at the regional level and, thus, regional results should be used with caution. A sensitivity test was performed in order to determine the share of food basket cost differences between regions that were due to prices and those that were due to the composition of the food basket. The results showed that about 70% of the differences in regional food basket costs compared to the national average were due to the composition of the food basket and about 30% were due to differences in prices. This highlights the importance of the composition of the food basket in food costs and the importance of improving estimates of regional consumption patterns. There was wide variability in these results. For example, nearly all of the difference in Mtwara region was due to prices while nearly all the difference in Dodoma region was due to the composition of the food basket. The Dar es Salaam region was representative of the national average, with 29% of the difference in food basket costs compared to the national average due to prices and 71% due to the composition of the food basket.

Composition of the Typical Diets

Maize is the dominate food staple in Tanzania, accounting for an average of 40.6% of the share of total calories in the 21 regions during 2011-2014. However, the share of maize varied, accounting for less than 25% of total calories in Kagera, Dar es Salaam, Mara, Mtwara and more than 50% in Manyara, Rukwa, Shinyanga and Singida (Figure 1a). Rice was the second largest item in the typical diet, accounting for an average of 10.5% of total calories in the 21 regions. The calorie shares from rice ranged from a low of 2.9% in Manyara to a high of 20.9% in Dar es Salaam (Figure 1b). Cassava was the third largest component of the diet, accounting for 9.3% of total calories and the largest share of calories in Mtwara (28.7%), Mara (33.0%), and Kigoma (28.3%) regions but only 0.6% in Arusha and 1.3% in Dar es Salaam (Figure 1c). Dry beans ranked fourth in their contribution to total calories in the typical diet, accounting for 6.1% and having less variability than either maize or rice (Figure 1d). Bananas were an important contributor to the diets in Kagera, but a relatively small component of the diets in most other regions. Fish and animal products accounted for only 1.1% and 3.4% of total calories, respectively. The three largest food items accounted for 65% of total calories in the typical diet. Diets were more diversified in more urban regions and higher income regions and less diversified in more rural regions. Annex Table A1 provides the calorie shares for all regions.

Figure 1. Calorie Shares of the Largest Food Items in the Typical Food Basket (%).



Source: SERA based on National Bureau of Statistics data.

Food Prices

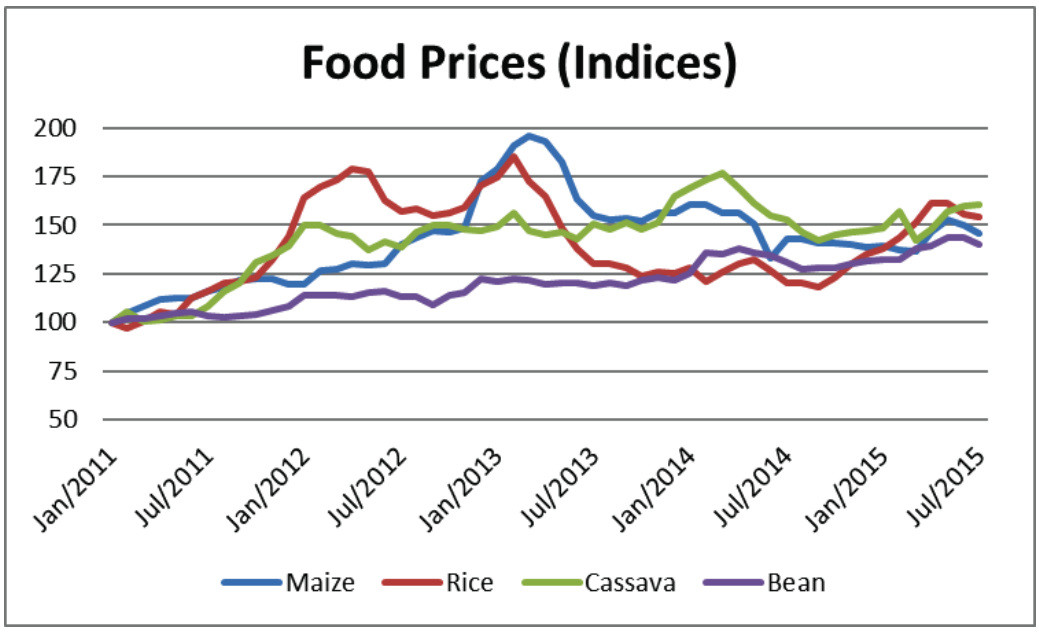
Retail food prices varied widely across Tanzania with perishable foods, such as mangoes and bananas, having the highest variability, with the highest average price among the 21 regions more than triple the lowest price. Staples, such as maize and cassava, had highest prices that were more than double the lowest prices. Rice, wheat flour, and sugar had the lowest variability with the highest price above the lowest price by 31%, 24%, and 18% respectively. Improved roads, better storage, and improved market information would all contribute to reducing the price differences and result in higher prices for producers, lower prices for consumers, and improved food security. The range of prices and the coefficient of variation (CV)[2] of prices are shown in Annex Table A2.

A number of regions had the lowest or highest prices in more than one commodity which, at least in part, reflects transportation costs and linkages. Rukwa had the lowest prices for maize and rice, Singida had the lowest prices for cooking oil and fresh fish, Kagera had the lowest prices for beef, beans, and cooking bananas; and Kigoma had the lowest prices of cassava, sweet potatoes, sweet bananas, and mangoes. Mtwara had the highest prices for fresh fish, beef, cooking bananas, and chicken; Lindi had the highest prices for beans, finger millet, and mangoes; and Kilimanjaro had the highest prices for cassava and sweet bananas. The southern regions of Mtwara and Lindi accounted for the highest prices for 7 of the 17 food items and are regions not well linked by transportation. These regions are especially vulnerable to food insecurity if local food production is disrupted by drought or other events.

Food prices were not found to be highly correlated which has important implications for food security and policy responses. The monthly retail prices of the four food items with the largest calorie shares in the typical food basket are shown in Figure 2. The average correlation coefficient between these food prices was about 0.50 which means that approximately one-quarter of the variability in one food price was explained by the variability in another food price. This has important implications for food security because it means that individual food prices have not historically risen or fallen together and that gives consumers greater opportunities to switch

[2] The coefficient of variation is defined as the standard deviation divided by the mean of the data series.

Figure 2. Prices of Four Largest Food Items in the Typical Diet.



Source: SERA based on National Bureau of Statistics data.
Note: The indices are for nominal food prices in TZS/kg, with January 2011=100.

among food items when the price of one item rises. Nominal prices for these important food items have not trended higher since 2013, and prices for each region are shown in Annex Table A3.

Food Basket Costs

The average nominal food basket costs during 2011-2014 ranged from a low of 21,921 TZS per person per month in Kigoma to a high of 44,020 TZS per person per month in Dar es Salaam (Table 1). The lowest food basket costs were generally concentrated in surplus producing regions such as the regions in the Southern Highlands and the highest were in more urbanized regions such as Dar es Salaam and more remote regions such as Mtwara and Lindi. Mwanza also had high food costs. Comparing food basket costs across regions is not

Table 1. Nominal Food Basket Costs by Region, (TZS/ Person/ Month)

Region	Average 2011 - 2014	Region	Average 2011 - 2014
Dodoma	25,739	Mbeya	26,550
Arusha	39,849	Singida	26,576
Tanga	28,460	Tabora	29,974
Kilimanjaro	41,212	Rukwa	25,679
Morogoro	31,774	Kigoma	21,921
Pwani	42,040	Shinyanga	33,310
DSM	44,020	Kagera	31,991
Lindi	32,988	Mwanza	40,101
Mtwara	41,111	Mara	38,735
Ruvuma	23,854	Manyara	28,688
Iringa	27,645	Average	32,486

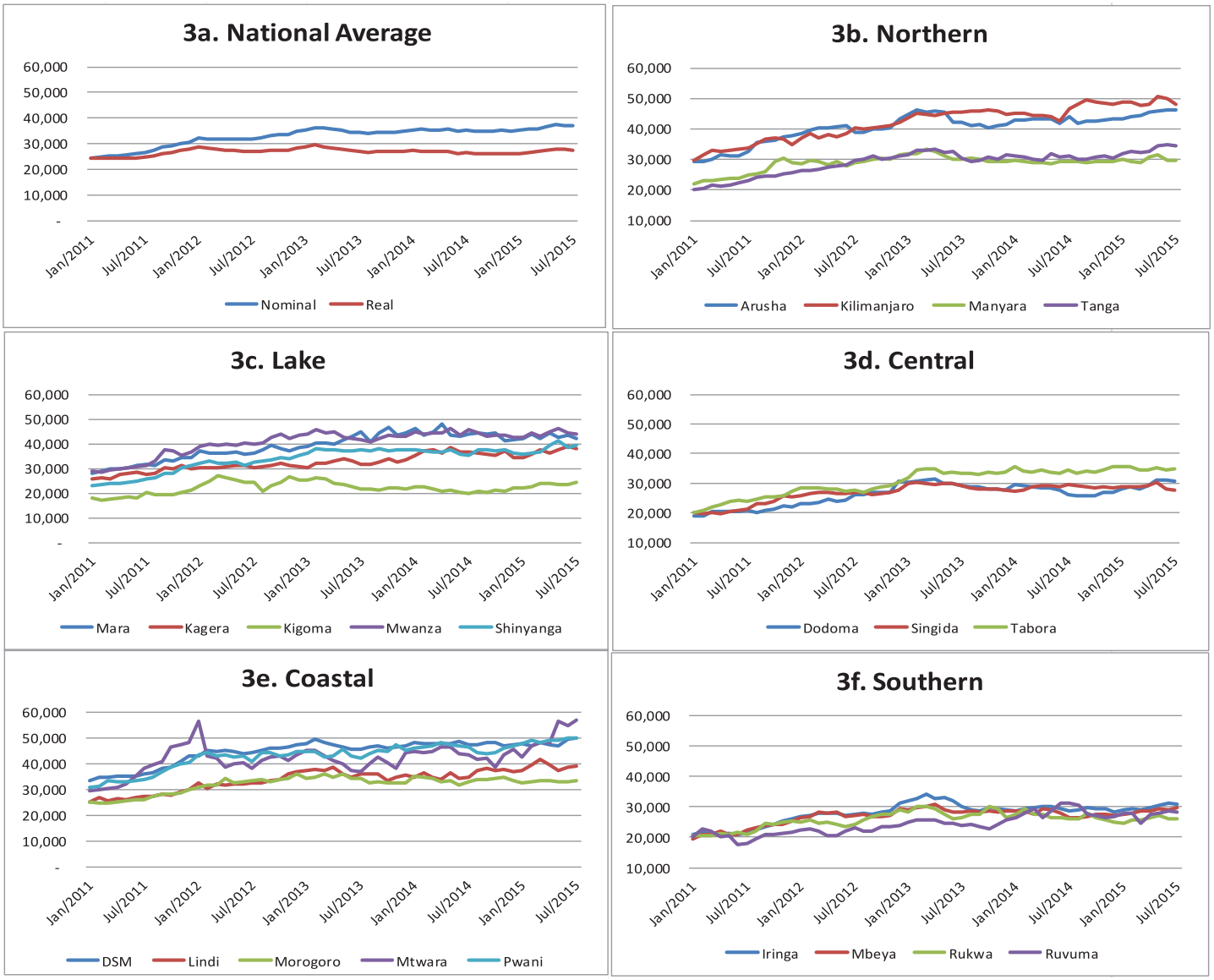
sufficient to identify regions vulnerable to food insecurity because it does not consider the ability to access food. Access to food depends on income as well as food costs and other factors, and is usually measured as the share of household income spent on food. The USDA[3] study concluded that the households in the bottom two income quintiles[4] in Tanzania face problems with access to food because the cost of a minimal food basket is close to 100% of the average income of the bottom quintile and 80-90% for the second lowest quintile. Access to food in Tanzania was not measured because data on household incomes is not readily available. Per capita GDP is available for regions, and while not a good measure of household incomes, it does provide some evidence of the ability of households in various regions to access food. It shows that more urbanized regions, such as Dar es Salaam, have greater access to food because incomes in those regions are high enough to offset high food basket costs. The surplus producing regions in the Southern Highlands also have better access to food because they have both low food costs and relatively high incomes. The regions with the poorest access to foods are Kagera, Mara, Mtwara, and Shinyanga because they have high food costs and relatively low incomes.

While not an adequate measure of access, comparing food basket costs across regions provides useful information on relative food basket costs and regional differences. National average food basket costs are shown in Figure 3a in real[5] and nominal terms, and food basket costs for all other regions are shown in Figure 3(b-f) only in nominal terms because regional price deflators are not available to compute real regional food basket costs. Real food basket costs for Tanzania have been relatively stable since 2012 (Figure 3a) while nominal food basket costs have increased modestly. Real food basket costs peaked in January 2013 and declined 6.4% through July 2015 while nominal food basket costs increased 2.6% over this period. Comparing nominal food basket costs across Zones shows that Coastal and Lake Zones had the highest food basket costs while the Southern and Central Zones had the lowest. There were significant differences in food basket costs within Zones, with Kigoma region having much lower costs than other regions in the Lake Zone and Manyara and Tanga having much lower food basket costs than Arusha and Kilimanjaro in the Northern Zone. Mtwara in the Coastal Zone has had significantly greater variability in food basket costs than other regions in that Zone and was experiencing a period of rapid food basket cost increases in mid-2015. This illustrates the usefulness of the Food Basket Methodology as an early warning tool.

The contribution of individual food items to food basket costs contrasts sharply with the contribution of these food items to total calories in the diets. Fish and animal products (beef, dairy, and poultry) accounted for 34% of the cost of the typical food basket but contributed only 5% of total calories, while cereals (maize, rice, millet, sorghum, and wheat flour) contributed 26% to the cost of the typical food basket but 54% to total calories (Annex Table A4). Fish had the largest contributions to food basket costs (16.7%), followed by maize (14.5%). Rice was the third largest cost component of the typical diet (8.6%), but ranked first in Dar es Salaam at 13.9%. Cassava was largest in Kigoma and Mara and fourth largest nationwide accounting for 7.5% of total food basket costs. Beans, which are an important source of protein accounted for 6.1% of total calories and 5.8% of total costs. The relatively low share of beans in the calories and costs of the typical diet suggest that beans could improve the protein content of the diet at relatively low cost. Food basket costs were much less variable during 2011-2014 than the prices of the major food items that comprised the basket. For example, the coefficient of variation (CV), was about half as large for the cost of the typical food basket as for the individual prices of the food items that comprised the food basket. The average coefficient of variation of the typical food basket was .121 compared to the average coefficient of variation of individual food prices of .223. The CVs for the prices of individual food items are reported in Annex Table A2 and were computed as the average of the CVs in each region for monthly retail prices from January 2011 to December 2014. The average CVs for the four food items with the largest calorie shares in the food basket were: maize (.226), rice (.186), cassava (.214), and beans (.124).

[3] USDA, Economic Research Service, "Measuring Access to Food in Tanzania: A Food Basket Approach" by Nancy Cochrane and Anna D'Souza, February 2015
[4] A quintile is 20%, so the lowest income quintile would be the households with the lowest 20% of incomes of all households.
[5] The non-food CPI was used as the deflator because food is a large component of the overall CPI and deflating by it would understate food price inflation.

Figure 3. Food Basket Costs, January 2011-July 2015 (TZS/month/person).



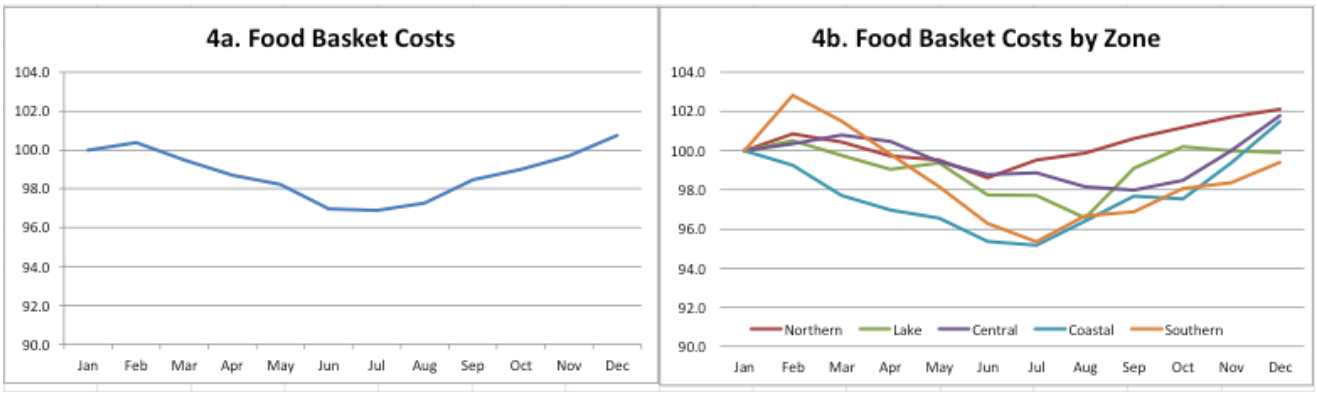
Source: SERA based on National Bureau of Statistics data.

Seasonality

Food basket costs and food prices had strong seasonal patterns during 2011-2014, with prices reaching a peak during November to February and then declining to their lows during June to August[6]. This pattern was evident in all regions and for most food items. Figure 4a shows the pattern for the national average food basket measured in real terms relative to non-food consumer items in the economy. Food basket costs declined about 4% from highs to lows and then returned to their highs during the end-of-year period. Figure 4b shows the food basket cost index for geographic Zones and shows a similar pattern. The crop-based food prices (maize, rice, cassava, beans) had a similar seasonal pattern to the food basket costs, while the non-crop-based food item (fish, chicken, beef, milk) did not follow the same seasonal pattern as closely. Real fish prices did not have an evident seasonal pattern as prices rose steadily throughout the year, while beef showed a similar seasonal price pattern to crop-based food prices. Chicken and milk had a less pronounced seasonal pattern than crop-based food prices but followed the same pattern. The seasonal pattern in food basket costs was less variable than the seasonal pattern for individual crop-based food items.

[6] The seasonal indices were computed as the average of the price movements of real (deflated) prices in each year relative to January which was set equal to 100. Real prices were used instead of nominal prices to remove the tendency for nominal prices to increase throughout the year and thus appear as seasonal trends.

Figure 4. Seasonal Food Basket Costs and Food Prices, Index with January=100.



Source: SERA based on National Bureau of Statistics data.

Conclusions and Policy Implications

Food is the largest expenditure item for the typical household in Tanzania and accounts for significantly more than half of total expenditures for the poorest households. The typical food basket contains a large number of food items, but relatively few account for most of the calories in the food basket. Maize accounts for about 40% of total calories, but only 20% in some regions such as Dar es Salaam. Rice and cassava are the second and third most important foods based on their contribution to calories in the diet, and each contributes about 10% of total calories. Cassava is an important food item in a few regions such as Mara, Kigoma, and Mtwara where it contributes about 30% of total calories but is less important in most other regions. The contribution of individual food items to food basket costs is significantly more diversified than the contribution to calories in the diet. Maize accounts for 14.5% of total food basket costs while rice and cassava contribute 8.6% and 7.5%, respectively. Cereals (maize, rice, millet/sorghum, and wheat flour) account for about one-third of total food basket costs while contributing 54% of total calories to the diet. Animal products and fish account for about one-third of total food basket costs but contribute only 5% to total calories. The three largest food items in each region accounted for an average of 65% of total calories in the typical diet but only 40% of food basket costs.

Food prices have large variations between regions, with highly perishable foods such as mangoes and bananas having average prices in the region with the highest prices that are more than triple those in the region with the lowest prices. Maize prices are less variable than highly perishables, but the highest prices are still more than double the lowest prices. Rice, sugar, and wheat flour have the least variability; with the highest prices above the lowest prices by 31%, 18%, and 24% respectively. Part of the variability of prices is due to high transport costs, especially for foods such as maize, cassava, and potatoes that have low value-to-weight. But, others such as cooking oil that have high value-to-weight also have high variability and this may reflect market imperfections or a lack of market information that would encourage traders to profitably transport these items between regions. Improvements in roads, storage, and information systems would reduce these price differences and result in higher prices for producers and lower prices for consumers.

Food basket costs also vary widely between regions, with Dar es Salaam having the highest average food basket costs and Kigoma the lowest. The surplus producing regions of the Southern Highlands generally have the lowest average food basket costs at approximately 25,000-30,000 TZS per person per month. The Central Zone has the next lowest average food basket costs at slightly more than 30,000 TZS per month; and the Coastal, Lake, and Northern Zones have the highest food basket costs. However, there are large differences within these Zones (refer to Table 1 for details). Mtwara has the most volatile food basket costs and that seems to reflect the poor transportation linkages with other regions and highlights the vulnerability of this region to food insecurity when domestic production is disrupted. The differences in food basket costs between regions are due both to differences in prices and differences in consumption patterns, with about 70% of the differences due to the

composition of the diet and 30% due to differences in prices for Tanzania. Nominal food basket costs have increased over the 2011-2015 period, but real food basket costs have declined by about 6% since 2013. Real food basket costs have not shown the large seasonal variations that occur in individual food prices.

Main Findings and Policy Implications

Food prices are not highly correlated.

The prices of the four food items that account for more than two-thirds of total calories in the typical diet (maize, rice, cassava, and beans) are not highly correlated.
Policy Implication: A price increase in one of these food items does not typically mean that the prices of the other food items will be significantly affected. That reduces the food security concern when the price of one of these important food items increases.

Food basket costs are less variable than food prices.

The typical food basket is comprised of a large number of food items and the cost of the food basket is about half as variable as the prices of the items in the food basket.
Policy Implication: The cost of the typical food basket should be considered in monitoring and responding to food security concerns rather than just the prices of the basic staples.

Staple foods, such as maize and rice, account for a relatively small share of food basket costs.

Maize accounted for an average of 14.5% of total food basket costs and rice accounted for 8.6% in Tanzania. In politically sensitive Dar es Salaam, maize accounts for only 7.7% of the total food basket costs and rice accounted for 13.9%.
Policy Implication: Maize and rice are highly visible indicators of food security in Tanzania, but they account for a relatively small share of total food basket costs. The GOT should consider the entire food basket in its response to food security concerns, and should not focus on only the most visible food items.

Food consumption patterns vary widely across Tanzania.

Maize is the most important food item in most regions; but cassava, rice, and beans are also important. As incomes increase and diets diversify the importance of maize in the diet will decrease and other food items will become more important.
Policy Implication: Food assistance should not rely only on maize to meet the food needs of the poor and a cash transfer program would be more appropriate for responding to food security concerns in those regions where maize is not the basic staple.

Food prices vary widely between regions

The prices of most food items vary widely between regions due to high transportation costs, inadequate storage, and imperfect markets which are slow to adjust to price differences.
Policy Implication: Reducing this variability through investments in infrastructure and information systems would improve food security and increase prices to producers while also reducing prices to consumers.

ANNEX

Table A1. Calorie Shares of Food Items for 21 Regions (%).

	Arusha	DSM	Dodoma	Iringa	Kagera	Kigoma	Kilimanjaro	Lindi	Manyara	Mara	Mbeya
Maize	44.6	23.1	48.0	49.7	20.7	30.1	36.9	36.3	65.9	25.4	48.2
Rice	9.0	20.9	5.6	8.1	5.6	6.1	9.8	17.5	2.9	5.7	10.9
Beans	5.8	5.4	5.9	6.8	14.2	10.5	6.9	5.7	5.4	2.1	7.0
Bananas	2.9	1.2	0.0	1.6	16.6	3.4	11.1	0.8	0.7	1.7	3.2
Millet/Sorghum	1.1	0.8	16.9	0.4	0.2	0.2	0.7	4.4	0.5	11.5	0.6
Potatoes	0.4	0.8	0.3	1.3	1.3	0.1	0.3	0.1	0.2	0.2	1.3
Sweet Potatoes	0.2	0.4	0.6	0.9	3.1	1.9	0.5	0.6	0.1	0.9	0.9
Wheat/Other Grains	0.0	0.7	0.1	0.1	0.1	0.0	0.2	0.0	0.0	0.0	0.1
Cassava	0.6	1.3	0.5	6.6	15.3	28.3	0.7	10.5	0.2	33.0	0.9
Poultry	0.4	0.5	0.4	0.3	0.3	0.2	0.3	0.3	0.4	0.5	0.3
Beef/Goat	2.1	1.5	0.9	1.0	0.7	0.4	2.2	0.1	1.6	1.2	1.0
Fish	0.6	1.1	0.4	0.6	1.2	1.0	1.1	1.2	0.4	2.0	0.8
Cooking Oil	7.2	8.4	3.9	4.7	3.0	3.7	9.2	3.2	5.8	4.3	5.8
Ripe Bananas	0.5	0.6	0.2	0.6	0.9	0.5	0.5	0.3	0.1	0.2	0.7
Mangoes/Other Fruit	0.4	1.0	0.3	0.8	1.8	0.6	0.5	0.4	0.3	1.4	0.8
Sugar	5.8	5.5	2.5	3.7	3.5	1.7	6.6	2.5	4.6	3.0	3.1
Dairy	6.5	1.0	2.3	0.9	1.1	0.2	5.2	0.2	6.4	2.6	1.7
Total Calorie Share	88.0	74.2	88.7	88.1	89.4	88.7	92.8	84.2	95.4	95.6	87.2
Three Largest Share	60.8	52.4	70.8	64.6	52.6	68.8	57.8	64.3	78.2	69.9	66.1
	Morogoro	Mtwara	Mwanza	Pwani	Rukwa	Ruvuma	Tabora	Tanga	Shinyanga	Singida	Average
Maize	42.2	22.3	41.0	26.8	53.1	43.5	49.1	43.0	51.2	52.5	40.6
Rice	17.0	12.6	11.6	20.4	6.7	8.1	13.1	9.4	11.3	8.5	10.5
Beans	6.8	3.9	2.7	5.6	7.4	6.1	5.1	6.2	4.0	4.2	6.1
Bananas	3.9	0.8	0.8	2.4	1.4	1.0	0.3	3.2	0.3	0.3	2.7
Millet/Sorghum	0.2	1.9	1.8	0.6	1.6	0.3	3.5	0.3	3.2	11.8	3.0
Potatoes	0.6	0.2	0.1	0.4	0.4	0.2	0.1	0.4	0.2	0.2	0.4
Sweet Potatoes	0.8	0.3	6.3	0.7	1.6	1.2	2.9	0.4	3.5	0.6	1.4
Wheat/Other Grains	0.1	0.1	0.1	0.4	0.1	0.0	0.6	0.1	0.4	0.2	0.2
Cassava	4.7	28.7	15.2	8.5	7.2	22.3	2.7	4.1	3.0	1.0	9.3
Poultry	0.5	0.3	0.7	0.5	0.1	0.2	0.6	0.5	0.6	0.5	0.4
Beef/Goat	0.6	0.4	1.2	0.4	0.5	0.4	1.2	1.0	1.2	1.6	1.0
Fish	0.9	1.6	2.7	1.9	1.5	1.0	0.8	0.8	0.8	0.8	1.1
Cooking Oil	4.6	3.0	4.0	4.6	3.8	3.2	5.0	6.2	4.0	5.8	4.9
Ripe Bananas	0.7	0.2	0.3	0.6	0.4	0.5	0.3	0.2	0.2	0.2	0.4
Mangoes/Other Fruit	1.2	1.4	1.2	0.7	0.3	0.2	0.6	0.3	0.2	0.7	0.7
Sugar	2.6	2.8	3.0	4.3	2.0	2.5	2.6	5.9	3.3	2.4	3.5
Dairy	0.6	0.2	1.4	0.5	1.2	0.1	3.0	1.8	3.8	1.2	2.0
Total Calorie Share	88.0	80.6	94.0	79.3	89.2	91.0	91.5	83.9	91.2	92.5	88.3
Three Largest Share	65.9	63.6	67.7	55.7	67.6	73.9	67.3	58.7	66.4	72.8	65.0

Source: SERA based on National Bureau of Statistics data.

Table A2. Average Prices of Food Basket Items, 2011-2014, Range, Average, and CV.

	Lowest	TZS/kg		Highest	TZS/kg		Average	Range %	CV
Maize	Rukwa	404		Morogoro	953		651	136	0.226
Rice	Rukwa	1,306		Arusha	1,716		1,544	31	0.186
Beans	Kagera	1,180		Lindi	1,956		1,502	66	0.124
Bananas	Kagera	405		Mtwara	1,647		754	307	0.197
Millet/Sorghum	Iringa	1,146		Lindi	1,694		1,462	48	0.267
Potatoes	Mbeya	351		Pwani	1,104		745	214	0.167
Sweet Potatoes	Kigoma	343		Dodoma	857		608	150	0.215
Wheat Flour	Morogoro	1,159		Kigoma	1,439		1,318	24	0.078
Cassava	Kigoma	321		Kilimanjaro	858		598	167	0.214
Poultry	Tanga	3,765		Mtwara	13,017		6,119	246	0.112
Beef/Goats	Kagera	3,699		Mtwara	6,047		4,992	63	0.109
Fresh Fish	Singida	4,004		Mtwara	8,704		6,193	117	0.219
Cooking Oil	Singida	2,936		DSM	6,281		3,712	114	0.077
Sweet Bananas	Kigoma	606		Kilimanjaro	1,740		1,089	187	0.196
Mangoes	Kigoma	445		Lindi	1,685		1,091	279	0.305
Sugar	Iringa	1,815		Mbeya	2,143		1,990	18	0.093
Dairy	Tabora	777		Mtwara	1,474		1,474	90	0.112

Notes: Prices are the average of monthly prices from January 2011 to December 2014. Regions with the lowest and highest prices are shown along with the average of the 21 regions. The range of prices is shown as a percent of highest to Lowest (i.e., the range of maize is 549 TZS and the highest is 136% of the lowest). CV is the average of 21 regions.

Source: SERA based on National Bureau of Statistics data on retail food prices.

Table A3. Prices of Major Food Items by Region (nominal TZS/kg).

	Maize					Rice				
	2011	2012	2013	2014	2015*	2011	2012	2013	2014	2015*
Dodoma	393	527	681	475	486	1427	1791	1583	1336	1657
Arusha	667	847	961	876	928	1474	1980	1825	1587	1895
Tanga	460	461	615	469	473	1283	1972	1775	1608	1971
Kilimanjaro	425	599	958	983	1000	1361	1924	1830	1528	1914
Morogoro	803	933	1100	977	954	1302	1893	1502	1235	1399
Pwani	740	791	777	800	843	1321	2097	1782	1505	1914
DSM	661	788	983	948	940	1304	1956	1753	1624	1734
Lindi	500	566	713	646	766	1342	2032	1965	1465	1722
Mtwara	731	892	825	554	507	1211	2019	1774	1450	1800
Ruvuma	454	322	529	351	375	1292	1817	1622	1453	1676
Iringa	417	513	775	642	600	1247	1758	1558	1244	1443
Mbeya	361	481	673	529	498	1205	1888	1633	1500	1743
Singida	425	567	600	592	536	1363	2067	1716	1355	1629
Tabora	574	671	931	813	891	1169	1670	1661	1350	1550
Rukwa	311	456	529	320	293	1070	1523	1399	1231	1551
Kigoma	414	516	619	469	444	1224	1676	1397	1281	1626
Shinyanga	502	742	992	950	857	1179	1611	1375	1267	1586
Kagera	663	835	994	983	971	1302	1714	1400	1317	1690
Mwanza	484	628	651	613	484	1264	1817	1526	1466	1790
Mara	567	617	679	608	543	1232	1741	1442	1375	1700
Manyara	429	557	671	519	456	1391	1936	1741	1449	1804
Average	523	634	774	672	659	1284	1851	1631	1411	1704

Table A3. continued

	Cassava					Dry Beans				
	2011	2012	2013	2014	2015*	2011	2012	2013	2014	2015*
Dodoma	681	873	1039	785	898	1339	1544	1500	1522	1743
Arusha	576	798	736	798	713	1378	1611	1522	1408	1761
Tanga	433	614	674	538	619	1235	1467	1483	1600	1971
Kilimanjaro	565	802	911	1151	1150	1154	1490	1835	1456	1847
Morogoro	483	623	581	568	588	1226	1466	1644	1753	1814
Pwani	336	647	804	929	972	1308	1522	1517	1675	1761
DSM	414	572	573	655	841	1341	1533	1614	1657	1680
Lindi	382	423	465	495	534	1800	1983	2000	2042	1976
Mtwara	402	449	521	571	637	1375	1511	1500	1927	2000
Ruvuma	394	431	428	735	603	1167	1200	1126	1650	1638
Iringa	575	679	829	778	776	1364	1411	1483	1700	1886
Mbeya	399	455	483	448	442	1370	1521	1615	1964	1642
Singida	538	800	667	732	571	1242	1308	1400	1467	1400
Tabora	491	482	553	677	559	1262	1317	1527	1549	1670
Rukwa	654	963	639	815	631	1417	1248	1806	2252	2202
Kigoma	263	341	365	314	299	1236	1180	1272	1485	1494
Shinyanga	429	478	472	448	441	1167	1464	1517	1603	1743
Kagera	453	485	441	476	389	1119	1133	1217	1250	1299
Mwanza	549	794	725	740	736	1525	1583	1808	1917	1962
Mara	595	715	783	771	679	1500	1667	1517	1917	2000
Manyara	455	494	613	495	505	1316	1500	1467	1500	1615
Average	479	615	633	663	647	1326	1460	1541	1681	1767

Source: SERA based on National Bureau of Statistics data.

*January to July average.

Table A4. Food Basket Cost Shares of Major Food Items (%)

	Arusha	DSM	Dodoma	Iringa	Kagera	Kigoma	Kilimanjaro	Lindi	Manyara	Mara	Mbeya
Maize	16.3	7.7	16.9	18.4	9.8	12.0	11.6	11.6	21.8	7.1	16.2
Rice	6.8	13.9	5.9	7.5	4.4	6.9	6.9	15.9	2.9	3.8	11.3
Beans	4.1	3.6	6.6	7.1	10.1	11.9	4.8	6.5	5.3	1.8	8.2
Bananas	2.8	1.2	0.0	1.9	10.0	3.0	6.6	1.1	0.9	1.2	2.6
Millet/Sorghum	0.8	0.5	16.9	0.3	0.2	0.2	0.5	4.2	0.4	8.1	0.7
Potatoes	0.5	1.2	0.6	3.3	3.0	0.3	0.4	0.3	0.3	0.3	1.4
Sweet Potatoes	0.3	0.4	1.2	1.1	3.0	1.8	0.6	0.7	0.1	0.6	1.1
Wheat/Other Grains	0.0	0.3	0.1	0.1	0.1	0.0	0.2	0.0	0.0	0.0	0.1
Cassava	0.4	0.7	0.7	7.3	9.6	17.8	0.6	6.0	0.1	26.2	0.7
Poultry	1.9	2.1	3.5	2.4	3.4	2.2	1.6	4.2	4.7	3.3	3.0
Beef/Goat	16.1	10.0	10.2	9.9	4.5	4.7	17.1	0.9	14.7	7.7	10.3
Fish	7.3	12.6	6.7	12.4	12.9	17.8	13.7	22.9	5.8	18.7	13.8
Cooking Oil	5.6	8.7	3.7	3.9	2.6	4.0	6.1	3.3	4.5	4.2	4.9
Ripe Bananas	1.3	1.0	0.3	1.1	1.9	1.0	1.5	1.0	0.2	0.4	1.5
Mangoes/Other Fruit	1.3	3.3	1.8	3.8	6.9	1.3	2.5	2.3	0.8	4.0	2.1
Sugar	4.4	3.9	3.0	3.9	3.5	2.6	5.0	2.5	5.2	2.5	4.0
Dairy	18.0	3.1	10.5	3.7	3.7	1.1	13.1	0.7	27.8	5.6	5.6
Total Cost Share	88.0	74.2	88.7	88.1	89.4	88.7	92.8	84.2	95.4	95.6	87.2
Three Largest Share	50.5	36.4	44.3	29.8	33.0	47.7	43.9	50.4	64.3	53.1	41.3

Table A4. continued

	Morogoro	Mtwara	Mwanza	Pwani	Rukwa	Ruvuma	Tabora	Tanga	Shinyanga	Singida	Average
Maize	22.0	7.1	10.6	8.6	14.5	13.1	21.3	13.2	21.3	18.8	14.5
Rice	14.0	8.7	7.7	14.3	6.0	9.3	11.3	9.7	8.1	9.1	8.6
Beans	6.2	2.9	2.2	3.8	9.3	6.4	4.6	6.1	3.3	4.1	5.8
Bananas	3.1	1.6	0.7	3.4	2.6	1.2	0.4	2.3	0.3	0.4	2.3
Millet/Sorghum	0.2	1.4	1.3	0.5	1.4	0.4	2.9	0.3	2.2	10.2	2.8
Potatoes	0.9	0.3	0.2	0.8	0.8	0.5	0.3	0.9	0.3	0.5	0.8
Sweet Potatoes	0.9	0.3	4.0	0.9	2.2	1.4	3.2	0.7	3.6	0.8	1.5
Wheat/Other Grains	0.1	0.1	0.0	0.2	0.1	0.0	0.5	0.1	0.3	0.2	0.1
Cassava	3.6	14.6	11.4	5.9	9.2	20.0	2.2	3.5	1.8	1.1	7.5
Poultry	3.6	4.4	3.4	2.2	1.8	1.9	4.7	2.8	6.5	7.1	3.5
Beef/Goat	5.6	3.5	6.9	3.3	5.1	5.4	8.8	9.5	9.3	14.7	8.0
Fish	11.0	26.6	31.6	23.7	23.5	22.3	14.4	16.4	13.9	9.3	16.7
Cooking Oil	4.6	1.9	2.3	2.8	3.4	3.2	3.7	5.5	2.9	4.7	3.8
Ripe Bananas	1.4	0.4	0.6	1.4	1.4	1.1	0.6	0.4	0.4	0.6	0.9
Mangoes/Other Fruit	6.2	3.9	5.1	2.9	1.4	1.0	1.8	1.1	0.8	2.9	2.8
Sugar	2.6	2.2	2.5	3.1	2.5	3.3	2.8	6.1	3.3	2.8	3.3
Dairy	2.0	0.6	3.4	1.3	3.9	0.4	8.0	5.4	13.0	5.1	6.1
Total Cost Share	88.0	80.6	94.0	79.3	89.2	91.0	91.5	83.9	91.2	92.5	89.0
Three Largest Share	47.0	49.9	53.6	46.7	47.4	55.4	47.0	39.3	48.3	43.7	39.8

Source: SERA based on National Bureau of Statistics data.

Reference:

USDA, Economic Research Service, "Measuring Access to Food in Tanzania: A Food Basket Approach" by Nancy Cochrane and Anna D'Souza, February 2015.

Other Policy and Research Briefs available from SERA at www.tzsera.com

SERA Policy Brief No. 1: Time to Re -think the Food Crops Export Ban, August 2012.

SERA Policy Research Brief No. 1: Drivers of Maize Prices in Tanzania, November 2014.

SERA Policy Brief No. 2: A Secured Transactions/Collateral Registry System Can Unlock Credit to Smallholders and SMEs, June 2015.

The United Republic of Tanzania

Ministry of Agriculture, Livestock and Fisheries

The 2nd Annual Agricultural Policy Conference

Theme: Agricultural Sector Transformation for Food Security, Jobs Creation and Poverty Reduction

23rd to 25th February 2016

Serena Hotel, Dar es Salaam

2ND ANNUAL AGRICULTURAL POLICY CONFERENCE

	Opening Session **Tuesday, February 23rd, 2016**	**Overall Moderator: Prof. Andrew Temu, Sokoine University of Agriculture**
TIME	**ACTIVITY**	**RESPONSIBLE PERSON/ORGANIZATION**
1400 – 1500	**OPENING SESSION** - Registration - Welcoming remarks and introduction - Objectives of the Annual Agricultural Policy Conference - Key note presentation: Progress in policy reforms under the New Alliance/CAADP framework in Tanzania - Inviting the Guest of Honor - Opening speech by the Guest of Honor - Vote of thanks followed by media engagement	 - Prof. Andrew Temu - Prof. Samwel Wangwe, Chairperson PAG - Geoffrey Kirenga, CEO SAGCOT Center - Prof. Wangwe - Hon. Mwigulu Nchemba (MP), Minister for Agriculture Livestock and Fisheries - Audax Rukonge, Executive Secretary ANSAF
1500 – 1630	Welcoming remarks for the 2016 Innovation and Technology Symposium Innovation and Technology in Agriculture Panel-I: Mobile technology - Use of mobile telephone in M&E – PushMobile - TAHA - Mkulima – Vodacom - Digital payment of local taxes – MaxCom - SRI - Nafaka - Horticulture – TAHA	- Prof. Samwel Wangwe Chairperson - Dr. David Nyange
1630- 1715	Launch of ANSAF & AGRA project on Enhancing Effective Delivery of Agriculture Policies and Regulations for Equitable Access to Quality Inputs by Smallholder Farmers in Tanzania	- PS Livestock Dr. Mashingo - ANSAF Audax Rukonge - AGRA Gungu Mibavu
1715 – 1800	Young champions in Agribusiness Success stories and innovations among young people	- PS Fisheries, Dr. Budeba - ANSAF - Selected young people
18:00 – 20:00	Cocktail Reception	- ANSAF/Secretariat

	DAY 1 WEDNESDAY, FEBRUARY 24TH, 2016	

0830 - 1000	**THEMATIC AREA 1: AGRICULTURE SECTOR POLICY** - Paper 1.1: Policy Options for Food Security, Agricultural Growth and Poverty Reduction - Paper 1.2: Impact of NFRA pricing on producer and consumer markets - Paper 1.3: An assessment of COWABAMAS and NFRA with policy implications to sustainable marketing	**Moderator:** David Nyange, MSU - Don Mitchell, USAID/SERA - Karl Pauw (FAO - Addis) and Ntemi Nkonya (MAFAP) - Audax Rukonge, ANSAF

	Panelist: - Ms. Janet Nkuvililwa Simkanga, MALF, Director of Planning and Policy - Mr. Ombaeli Lemweli – MALF, Food Security Department - Mr. Charles Walwa – MALF, CEO National Food Reserve Agency - Winnie Bashagi , Rice Council of Tanzania - Ikunda Terry, East Africa Grain Council, Tanzania Chapter	
1000 - 1030	Tea Break	
1030 - 1230	**THEMATIC AREA 2: AGRICULTURE MARKETS AND TRADE POLICY** - Paper 2.1: Food systems transformation in Tanzania - Paper 2.2: Impact of EU Trade and Investment policies in Tanzania's Agriculture: Implications on policy coherence for development - Paper 2.3: Impact of milk import in Tanzania's dairy industry - Paper 2.4: Evidence based decision-making in implementation of agriculture strategies - Challenges and Opportunities of agriculture M&E in Tanzania **Panelist:** - Odilo Majengo, MIT, Director of Marketing - Jason Snyder, Michigan State University - Said Salum, Bakheresa Group of Companies - Neema Mrema, CRS	**Moderator**: Michael Kairumba, CEO, Agriculture Market Development Trust - David Tschirley, Michigan State University - Solomon Baregu–ESRF - Dr. Oswald Mashindano – ESRF - Stella Massawe/Prudence Lugendo/Sophia Mlote/ ReSAKSS/PAPAC
1230 - 1400	**LUNCH BREAK**	
1400 - 1600	**THEMATIC AREA 3: ENABLING POLICY FOR PRIVATE SECTOR INVESTMENT** - Paper 3.1 Enabling the Business of Agriculture (EBA) in Tanzania - Paper 3.2 Agriculture Business Environment Survey - Paper 3.3 A synthesis of cashew and coffee value chain from a policy perspective **Panelist:** - Raveliana Ngaiza, MALF - Robert Pascal, Tanzania Agriculture, Development Bank - Salim Shamte, Katani - Jacqueline Mkindi, TAHA - Amos Omore, ILRI	**Moderator:** Anthony Chamanga, TAHA - Nealone Devore, (World Bank – Washington) - Don Mitchell, USAID/SERA - Gilead Teri, ANSAF
1600 - 1630	**TEA BREAK**	
1630 - 1700	Recap and closing of Day 1	Prof. Andrew Temu

	DAY 2 THURSDAY, FEBRUARY 25TH, 2016	
TIME	**ACTIVITY**	**RESPONSIBLE PERSON/ORGANIZATION**
0830 – 1000	**THEMATIC AREA 4: LAND TENURE POLICY** - Paper 4.1 Access to land for agriculture in Tanzania: Implications to agricultural sector transformation and smallholder farmers - Paper 4.2: Land Compensation Schemes and Valuation Models **Panelists:** - Mr. Steve Michael, MALF - Mr. Steven Luvuga, Mviwata - Prof. Ntengua Mdoe, Sokoine University of Agriculture	Moderator: Sophia Mlote - Thomas Jayne, Michigan State University - Don Mitchell, USAID/SERA
1000 – 1030	Tea Break	
1030 – 1230	**ACCESS TO FINANCE AND TECHNOLOGY** - Paper 5.1: Secured Transactions Reforms: Leveraging movable asset as collateral for SME access to credit - Paper 5.2: Leveraging mobile technology in accessing market information, and financial services **Panelist:** - Mr. Elibariki Masuke, CRDB Bank - Mr. Rashid Malima, Pride Tanzania - Mr. Sanga, MaxCom	**Moderator:** Alex Mkindi, SERA - Professor Dale Funnish, USAID/SERA - Mr. Freddie Manentho, PushMobile
1230 – 1400	Lunch Break	
1400 – 1600	**THEMATIC AREA6: AGRICULTURE INPUT POLICY** - Paper 6.1: Estimation of Fertilizer response in Tanzania: Implications to input subsidy program - Paper 6.2: Presentation of findings from AGRA study and country visits on problem policies, regulations administrative practices to private sector investment in agricultural value chain - Paper 6.3: Policy reforms in the seed sector - Paper 6.4: Evaluation of the mechanization program under ASDP. **Panelist;** - Mr. Canuth Komba, MALF - Mr. Liston Njoroge, AGRA - Dr. Mshindo Msolla, AFAP - Dr. Daniel Ndyetabula, Sokoine University of Agriculture	**Moderator:** Mr. Gungu Mibavu - David Mather, Michigan State University - Joseph Rusike, AGRA - Patrick, USAID/SERA - Prof. Godfrey Mrema, ReSAKSS/PAPAC
1600 – 1630	Tea Break	
1630 – 1700	Recap of day 2 and closing of the Conference	Prof. Andrew Temu

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Policy Options for Food Security, Economic Growth and Poverty Reduction

Don Mitchell
SERA Policy Project

February 24, 2016

www.tzsera.com

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Food Security has Many Dimensions

- **Increasing food availability** through improved incentives to farmers
- **Ensuring access to food** by providing safety nets to the poorest and most vulnerable
- **Ensuring utilization of food** through adequate diets and food fortification
- **Enhancing stability by reducing price volatility**, increasing storage and reducing post-harvest losses

Source: World Food Summit Declaration

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Poverty has declined in Tanzania

- **Tanzania has had sustained rapid economic growth** in the past decade of 6.6% per year
- **The basic needs poverty rate declined** from 34% in 2007 to 28% in 2012
- **Rural poverty declined** by 15% from 2007 to 2012, but remains high at 33%
- **Eighty percent of the poor and extreme poor live in rural areas** while only 4% of those living in Dar es Salaam were poor

Source: World Bank Poverty Assessment May 2015

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Most cost-effective way to promote food security in the long run

Exploit Tanzania's comparative advantage within the region in food crops production – especially maize and rice

Involve the poorer elements of the population as farmers or wage laborers to increase their incomes to improve food security

Encourage exports of surplus production to the region to prevent severe price declines

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Tanzania has a unique opportunity to increase food crops exports

- **Abundant natural resources**
- **Large yield gap between actual and potential**
- **Food deficit regional market**

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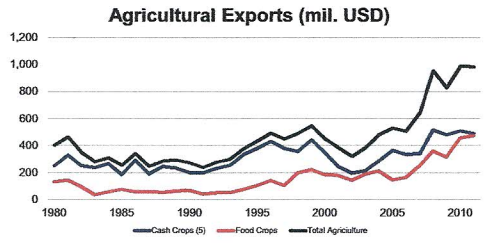
Food Crops Exports



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Improve Food Security by Adopting Policies that…

- Support increased production of food crops
- Encourage food crops exports to the region
- Improve the social safety net for poorest
- Hold adequate food reserves
- Establish a Transparent Rules-Based Emergency Food Import System

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Increase Food Crops Production

Increase food crops production to provide a surplus for export, and meet rising domestic demand

- Stable and Transparent Policies
- Increase Access to Improved Inputs and Credit
  - Seeds, Fertilizers and Agro-Chemicals
  - Establish a Collateral Registry/Secured Transactions Reform
- Commercialize Agriculture
  - Focus of Kilimo Kwanza, SAGCOT, BRN
  - Attract Foreign Investors

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Encourage Private Sector Exports of Food Crops

Increase exports to absorb increased production, stabilize prices, raise incomes, and reduce poverty

- Remove Restrictions on Trade
- Streamline Export Approval Process
- Monitor Crop Development and Export Surpluses
- Avoid Regional Disputes
  - Monitor Imports
  - Enforce Common External Tariffs

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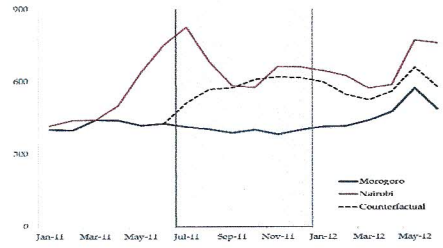
Impact of the 2011 Maize Export Ban on Morogoro Maize Prices (TZS/kg)



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Improve Social Safety Nets

Monitor Food Basket Costs as well as key food prices to gain better understanding of the impact of food prices on consumers

Strengthen MUCHALI – Tanzania Food Security and Nutrition Analysis System – an ad hoc assembly of stakeholders should become an institutional entity with dedicated funding

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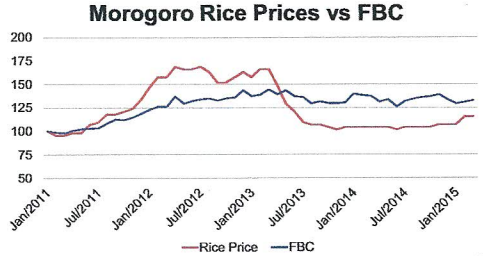
Food Costs are More Stable than Food Prices

Morogoro Rice Prices vs FBC



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Maintain Adequate Food Reserves, but…

Holding reserves is expensive but necessary to offset production shortfalls, for disaster relief, and to provide food aid for vulnerable groups

Holding reserves within a season is less costly than holding reserves from one season to the next because seasonal price increases will provide a margin to cover storage costs

Holding a mix of reserves within a season and from one season to the next would reduce costs while providing a hedge against unusual emergencies

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Maintain Adequate Food Reserves, but…

The operating cost for the National Food Reserve Agency (NFRA) for seasonal storage is USD 142/Mt and the full cost (including capital and opportunity costs) is USD 227/Mt

The National Food Reserve Agency (NFRA) is mandated to hold a strategic grain reserve of about 200,000 tons and bought 244,000 tons in 2014/15

Source: AIRD 2014

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Maintain Adequate Food Reserves, but…

AIRD analysis found that 100,000 tons of food bought at the time of harvest and held seasonally would be adequate for disaster relief and food aid in most years

Additional grain reserves may be held from year to year as a heldge against unusual circumstances but the combined reserve should not need to exceed current storage capacity of NFRA of 240,000 tons

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NFRA Operations

- **NFRA has the objective of having a well-managed and business-like agency**
- **However, it is often called upon to perform other functions** such as offering purchase prices that exceed the market and selling to millers at prices that are below the market
- **These functions disrupt markets and increase NFRA operating costs** and should be avoided to the extent possible

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Emergency Food Imports May Occasionally be Required

Despite increasing surpluses, droughts and other disasters may create the need for emergency food imports

Such imports should be done in a transparent and rules-based manner to ensure adequate food supplies, avoid disrupting markets, and discourage rent seeking

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Basic Staples Account for a Small Share of Food Costs … despite their high visibility and political importance

Maize accounts for about 40.6% of calories but only 14.5% of the costs of the typical diet

Rice accounts for 10.5% of calories but only 8.6% of food basket costs

Urban consumers have higher average incomes and can cope better with higher prices than rural consumers in poorer regions

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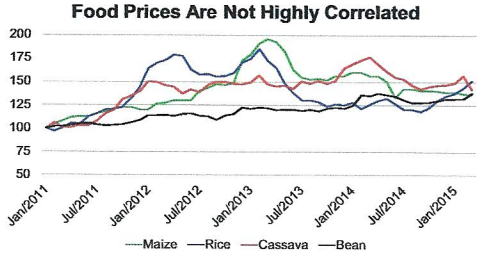
Food Prices Are Not Highly Correlated



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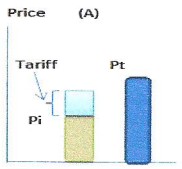
Transparent Rules-Based System of Emergency Food Imports

Case A: Price in Tanzania is above the world market import price plus EAC tariff

Private sector can import profitably and pay the import tariff and imports will cap prices in Tanzania.



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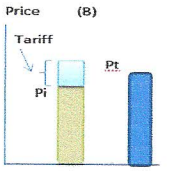
Transparent Rules-Based System of Emergency Food Imports

Case B: Price in Tanzania is below the world market import price plus EAC tariff

Private sector cannot import profitably and pay the import tariff. Reduce the tariff to allow profitable import and imports will cap prices in Tanzania.



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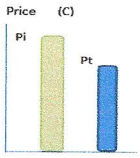
Transparent Rules-Based System of Emergency Food Imports

Case C: Price in Tanzania is below the world market import price without EAC tariff

Private sector cannot import profitably even with zero tariff (extreme case). Reduce tariff to zero and appeal to International community.



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Market Intelligence Unit is Needed

To monitor food prices, production, and stocks in Tanzania

To monitor regional and global food prices, production, and stock levels

To advise Government on Emergency Food Import Actions

23

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Conclusions

Tanzania can increase food security, achieve more rapid agricultural growth, and reduce poverty through food crops exports to the region.

Policies that support increased food crops production and exports are essential to fully achieving this potential.

Social safety nets will still be needed to protect the poorest and those temporarily affected by drought or other disasters.

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The Business Environment for Tanzanian Agriculture

SERA Policy Project in collaboration with MALF, PDB, SAGCOT and TIC

February 24, 2016

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Tanzania has not been able to attract large investments in agriculture

According to the Bank of Tanzania (2012), only 2% of Foreign Direct Investments (FDI) was in the agricultural sector and they concluded…

"Efforts to make agriculture more attractive to investors need to be stepped up in order to boost inflows to agriculture…"

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Large investments in agriculture

- **Are the cornerstone of Kilimo Kwanza, SAGCOT, and Big Results Now**

  BRN called for 25 commercial farming deals in rice and sugarcane. Not all, but some, will require foreign investors.
- **Foreign investors bring capital, technology, and market linkages**

  Effective model to support smallholder farmers, produce for domestic markets, expand the tax base, and contribute to export earnings.

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Why has Tanzania had difficulty attracting foreign investors into agriculture?

- SERA Policy Project in collaboration with MALF, PDB, SAGCOT and TIC undertook a study of the agriculture business environment to find out why.
- The study compared **Tanzania, Mozambique** and **Zambia** on policies, taxes, incentives, access to land, input costs, and the macroeconomic situation.

4

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Study Team

Don Mitchell, SERA Project
Daktari Hango, MALF
James Ngwira, PDB
Emmanuely Lyimo, SAGCOT
Martin Masalu, TIC
Edith Lazaro, SERA Project

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Arable Land (million hectares)

Country	Arable Land	Cultivated	Not Cultivated
Tanzania	**44.0**	**10.5**	**33.5**
Mozambique	**36.0**	**6.0**	**30.0**
Zambia	**42.0**	**1.5**	**40.5**
Sub-Saharan Africa			**201.5**
World			**445.6**

Source: World Bank, FAO, Countries' Agriculture Census

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Macroeconomic Comparisons

Country	GDP Growth 2005-15 (%)	GDP Per Capita (USD)	Agriculture Share of GDP (%)
Tanzania	6.6	955	31.5
Mozambique	7.5	585	25.0
Zambia	7.7	1,759	9.0

Source: World Bank (WDI), Tanzania NBS, Instituto Nacional de Statistical Mozambique, Central Statistical Office Zambia

Note: GDP/Capita, Agr. Share of GDP, and Interest Rates are for 2014

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Rankings on Overall Business Environment

Country	Ease of Doing Business	Global Competitive-ness	Corruption Perception Index
Tanzania	131	121	119
Mozambique	127	133	119
Zambia	111	96	85
Countries Compared	181	144	175

Source: World Bank, World Economic Forum and Transparency International

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Corporate Income Tax Rates (%)

Country	Standard Rate	Agriculture Processing	Agriculture Production
Tanzania	30	30	30
Mozambique	32	32	10
Zambia	35	10	10

Source: KPMG, PWC

Note: Mozambique is currently reviewing its rates and is considering extending the 10% rate to Agr-Processing

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Other Taxes/Expenses (%)

Country	VAT	Interest Rates	Pension (% of wages)	Electricity US cents Per KWH
Tanzania	18	16	10	16.7
Mozambique	17	14	4	7.0
Zambia	16	11	5	4.8

Source: KPMG, PWC, World Bank, Various Country Statistical Reports

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Crop Produce Cess

Tanzania	3-5% of gross value of crop production
Mozambique	none
Zambia	0.03% of gross value of production

Source: KPMG, PWC, World Bank, Various Country Statistical Reports

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Other Taxes in Tanzania

- Skills Development Levy 5% of wages (excluding farming)
- Workers Compensation (1% of wages)
- Local Service Levy of 0.03% of gross turnover
- Local Taxes and Fees: OSHA, Fire, Business License, Bill Board Fee, Environmental Fee, Waste Management Fee, Business Registration and License Fee, Workers Check-up Fee, Weights and Measures Levy, Fuel Levy

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Corporate Tax Impacts

Sugar Producer	Tanzania	Mozambique	Zambia
Field Costs	100	100	100
Factory Costs	100	100	100
Sales	220	220	220
PreTax Profits	20	20	20
Corporate Tax (%)	30	21	10
Profits	14.0	15.8	18.0
% of Sales	6.4%	7.2%	8.2%

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Corporate Tax + Cess Impacts

Sugar Producer	Tanzania	Mozambique	Zambia
Field Costs	105	100	100
Factory Costs	100	100	100
Sales	220	220	220
PreTax Profits	15	20	20
Corporate Tax (%)	30	21	10
Profits	10.5	15.8	18.0
% of Sales	4.8%	7.2%	8.2%

14

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Corporate Tax + Cess Impacts

Sugar Producer	Tanzania	Mozambique	Zambia
Field Costs	105	100	100
Factory Costs	100	100	100
Sales	210	210	210
PreTax Profits	5	10	10
Corporate Tax (%)	30	21	10
Profits	3.5	7.9	9.0
% of Sales	1.7%	3.8%	4.3%

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Acess to Land

Country	Land Market	Acquiring Village Land	Acquiring Govt Land	Time to Acquire Land
Tanzania	NO	Long and Uncertain	General Land	Several Years
Mozambique	NO	Long and Uncertain	Investment Corridors	Several Years
Zambia	YES		Block Farms	Few Days

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Agricultural Policies

	Trade Policies
Tanzania	Import Tariffs (sugar, rice, wheat, oils) Export/Import Permits Required Weak Enforcement (rice, sugar)
Mozambique	Import Tariffs (sugar, poultry, rice, oil) Quantitative Controls Weak Enforcement of Policies
Zambia	Import Tariffs (maize, diary, poultry, oils) Quantitative Controls Occasional export bans (maize) Export/Import Permits Required

17

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Agricultural Policies

	Marketing
Tanzania	Largely Private Sector National Food Reserve buys maize Cereals and Other Produce Authorized as buyer of last resort
Mozambique	Largely Private Sector ICM is buyer of last resort (but small) Reference Prices, but not enforced Commodity Exchange
Zambia	Food Reserve Agency buys 25% maize (500,000 tons strategic grain reserve) Private Sector Dominates All Other Developing a Commodity Exchange

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Agricultural Policies

	Smallholder Support
Tanzania	Input subsidies to smallholder (National Agricultural Input Voucher Scheme)
Mozambique	Donor Funded Input Subsidy Pilot – (Visa Card Issued to buy inputs) Development Grant Programs
Zambia	Input Subsidies to Smallholder Maize Farmers

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Innovative Programs/Policies

Delivery of Input Subsidies to Smallholders (Mozambique)	Visa Card issued to farmers who can spend at approved input suppliers. Farmer can chose inputs. Program has reduced fraud, improved service delivery.
Strategic Food Reserve (Mozambique)	Cash for 3 months imports held by Ministry of Finance (since 1990s) instead of strategic grain stocks.

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Other Agriculture Incentives

Mozambique:

- Exemption of import duty on equipment.
- 50% reduction of fuel taxes and incident tax on diesel, used in agriculture.
- 10% reduction per each Kw/h of electricity in agriculture production.
- VAT reduction on inputs and construction of irrigation scheme.

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Other Agriculture Incentives

Zambia:

- No import duty on irrigation equipment and reduced duty on imports of other farming equipment.
- VAT deferment on importation of selected of agricultural equipment and machinery.
- Dividends paid out of farming profit are exempt from tax for the first five years the company commences farming.

22

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Conclusion

- Zambia's easy access to land and favorable incentives for the agricultural sector have enabled it to attract large investments in agriculture.
- Mozambique is struggling to attract large investments in agriculture, despite a favorable incentive package for investors, due to difficulties in accessing land.
- Tanzania lacks special incentives for the agriculture sector and investors have difficulties accessing land. Tanzania has not been able to attract large investments into agriculture.

23

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Way Forward for Tanzania

- Improve procedures for investors to access land while protecting the rights of current land users
- Reduce corporate tax rates for agriculture
- Eliminate or reduce the crop produce cess
- Consolidate and cap local taxes
- Invest in infrastructure to increase competitiveness
- Change in mind set

24

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Land Compensation Schemes and Valuation Models

Based on Study by Landesa for SERA Project

presented by Don Mitchell
SERA Policy Project
February 25, 2016

www.tzsera.com

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Land Compensation Schemes

Fixed-Price Leases are the most common form of payment for the use of rural land in Tanzania

Land for Equity arrangements have had limited use but have received support from Government

Other Compensation Schemes could also be considered and may have advantages in particular situations

All three of these have been used in Tanzania

2

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Accurate Land Valuation is required to equitably establish benefits

- The Land Act requires the land valuer to to determine the market value of the property
- The lack of an active, transparent land market in Tanzania makes this difficult and often results in valuation and compensation that are inadequate

3

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Fixed-Price Leases

- Simplest and most common form of payment for use of rural land in Tanzania
- The land rights holder grants another party the right to use the land for a particular period of time in exchange for cash payment
- The amount, method of payment, and timing of the lease payment are stated in the lease contract
- There is no risk sharing or profit sharing in a simple Fixed-Price Lease and it would typically be used for short term leases

4

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Land for Equity Arrangements

- The land rights holder transfers the right to use the land to a company in exchange for an ownership share in the company
- The company typically contributes capital, technical expertise and market access and usually assumes responsibility for management of the company
- The land rights holder receives an ownership share (usually a minority ownership share) and may have limited say in the management of the activity

5

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Land for Equity Arrangements

- All shareholders usually receive dividends if the company is profitable and the profits are not reinvested in the venture.
- The shareholders share the risk that the company will not be profitable and that they may not receive a financial return on their investment
- If the venture is profitable and dividends are paid, the land rights holder may benefit

6

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Land for Equity Arrangements

- It aligns the financial incentives of the equity partners so that they have incentives to work cooperatively to make the venture profitable
- However, the project may not pay dividends for many years and the minority shareholders may not share fairly in the benefits
- There is substantial risk to the minority shareholder in successfully negotiating, monitoring, and enforcing these arrangements

7

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Land for Equity Arrangements May Work Well, if…

- The project is carefully evaluated in advance to determine the likelihood of financial success for the project and minority shareholder
- The minority shareholder is able to effectively carry out their responsibilities and manage their interests during negotiation and the lifetime of the project
- The land rights holder can afford to wait for an extended period before realizing any income

8

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A Fixed Equity Share Would Likely be Problematic

- No two projects or plots of land are identical and the equity share should be determined based on the value of the land to the project not a pre-determined percentage
- A pre-determined equity share could also create perverse incentives for an investor to acquire as much land as possible in exchange for the equity share

9

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A Fixed Equity Share Would Likely be Problematic

- Whether the equity share can be diluted could also influence future investments in the venture
  - If the shares cannot be diluted, then the minority shareholder would have no incentive to contribute capital or additional land to the venture
  - And the majority shareholder may be reluctant to invest capital without a corresponding investment by the minority shareholder

10

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Experience from South Africa

- The equity share model has many potential problems and experience in South Africa with land for equity deals over the past 20 years suggests that less risky structures such as Fixed-Price Leases may yield the best outcomes

11

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Hybrid Lease Arrangements May Be Beneficial

- A Hybrid Lease Arrangement could have a cash lease and an equity share that would allow a land rights holder to participate in the potential profits while still receiving a (reduced) cash lease payments
- This might be attractive to a land rights holder when the potential profits appear large but uncertain
- Alternative Hybrid Lease Arrangements could base cash lease payments on gross revenue

12

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Accurate Land Valuation is Important Regardless of Compensation Schemes and Significant Improvements are Needed

- Lack of a transparent land market in Tanzania leads land valuers to consider a wider range of valuation methods such as the cost of replacing the land or improvements, or valuations based on set levels prescribed by statute or regulation
- Widespread agreement among researchers and others that compensation for land taken by the Government is usually inadequate.

13

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Valuation are Important Regardless of Compensation Schemes and Significant Improvements are Needed

- Develop and utilize measures to accurately value land for investment purposes
- Update the legal and regulatory framework for valuation as well as the data used as a basis for public valuations
- Survey private valuers in Tanzania for best practices in valuing agricultural land.

14

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Asante Sana

Food Basket Analysis in Tanzania: February 2016 Trip Report

Nancy Cochrane
Economic Research Service USDA

The objectives of this trip were to

- continue work on a healthy food basket in Zanzibar, which was begun in September 2015,
- To help the Mainland Ministry of Agriculture initiate a desk study to develop food baskets for four pilot districts
- To introduce the concept of a healthy food basket to Mainland institutions

At the end of my visit, the Zanzibar participants had adjusted the Zanzibar food basket in a way that satisfied most nutritional requirements, although it is still deficient in a few key nutrients, such as calcium. The staff is looking forward to working further on this task with a U.S. nutrition expert. In the meantime, the staff announced their intention to initiate a quarterly reports on the representative food basket.

The Division of Food Security in the Mainland Ministry has expressed a desire to estimate food baskets at the district level using district market prices collected by local staff. They agreed to initiate a pilot study of four districts that commonly suffer food insecurity. The staff were also extremely interested in the concept of a healthy food basket. They were well aware that the narrow focus on availability of staple foods overlooked some serious nutritional problems in rural areas. They have been under pressure from multiple sides to pay more attention to nutrition.

Background: Constructing the Representative Food Baskets

During 2014 and 2015 USDA and the SERA Project worked with the Tanzanian Ministry of Agriculture, Livestock and Fisheries (MALF) to develop a set of representative food baskets for the 21 mainland regions, as a tool for measuring access. These were calculated using data from the 2010/11 Tanzanian National Panel Survey (TZNPS): a nationally representative household survey carried out by the Tanzanian National Bureau of Statistics (NBS)) to obtain consumption patterns—specifically, calorie shares of different foods consumed by households—for various groups of Tanzanian households. The calorie shares were used to construct food baskets that achieve the per capita daily calorie intake estimated for Tanzania by the FAO.

We used time series price data from NBS to calculate the monthly cost of these food baskets. The monthly food baskets consist of a set of foods that are typically consumed by households in the zone and make up 67 to 88 of total calories consumed by the average household. The ratio of the monthly per capita food basket cost and monthly per capita income provides a practical measure of food access. Any decline in the cost of food and/or increase in income are expected to improve the food security of a household. Monitoring food costs relative to consumer purchasing power can provide timely feedback on the effectiveness of food security policies and the investment required to address problems of food security.

As of now representative food baskets have been constructed for 21 regions on Mainland Tanzania plus Zanzibar. The exercise has revealed considerable dietary diversity across geographical regions. In the surplus maize producing regions of the Southern Highlands, diets are dominated by maize, which supplies nearly 50 percent of daily calorie intake. In the northwestern regions along Lake Victoria, maize provides much smaller shares of calorie intake. In the Mara region, the principle source of calories is cassava; in Kagera it is bananas. Diets in Zanzibar are dominated by rice.

..But These Representative Food Baskets Are Deficient In Key Nutrients

The representative food baskets reflect the typical diets of each region. But further analysis shows that they are seriously deficient in a number of key nutrients. We used data from the Tanzanian Food Composition Tables, which provide quantities of macro- and micro-nutrients per 100 grams for a wide range of foods, including cereals, pulses, roots and tubers, vegetables, fruits, dairy products and miscellaneous other foods. The tables provide values for 49 nutrients, including carbohydrates, protein, fat, vitamins, amino acids and minerals. We multiplied the daily quantities of each food in the food basket by the nutrient content of the food and summed up the values to derive an estimate of daily consumption of each nutrient. We compared those estimates with average minimum daily requirements for adult men and women.

Results for Zanzibar are shown in tables 1and 2.

Table 1: Representative food basket provides inadequate amounts of most vitamins…

Nutrient	Protein	Fat	Vitamin A	Vitamin E	Thiamine	Riboflavin	Niacin	Folic acid	Vitamin B12
Unit	grams	grams	mcg	mg	mg	mg	mg	Mcg	mg
Obtained from food basket	67.91	110.98	248.14	4.70	0.95	0.69	12.02	285.97	0.11
Requirements									
Men	39-46		900	15	1.2	1.3	16	400	2.4
Women	41		700	15	1.1	1.1	14	400	2.4

Table 2: …as well as many minerals

Nutrient	Calcium	Phosphorous	Magnesium	Potassium	Sodium	Iron
Unit	mg	mg	mg	mg	mg	mg
Zanzibar	87.69	648.57	261.84	2031.81	101.04	8.06
Requirements						
Men	1000	700	410	4700	1500	8
Women	1000	700	315	4700	1500	18

Among the important conclusions:

- The representative basket is adequate in protein, thanks to the high share of fish.
- The basket is seriously deficient in vitamins A, E, and B12, riboflavin, folic acid, calcium, magnesium, and potassium.
- The basket comes close to meeting requirements for other vitamins and minerals.

Similar analysis was done for two mainland regions: Mbeya and Mara.

Table 3: Mainland Regions also fall short

	Protein	Fats	Vitamin A	Thiamine	Folic acid	Vitamin B12	Calcium	Potassium
	grams		mcg	mg	mcg	mcg	mg	mg
Mbeya	48.01	29.66	243.25	1.49	315.42	0.18	74.17	2145.59
Mara	35.42	17.25	954.45	1.09	231.63	0.17	179.1	1540.32
Requirements								
Men	39-46		900	1.2	400	2.4	1000	4700
Women	41		700	1.1	400	2.4	1000	4700

The Mbeya food basket is sufficient in protein thanks to the large share of maize in the diet. But it is deficient in most other nutrients. The Mara food basket is sufficient in vitamin A, thanks to larger shares of sweet potatoes and cassava. But it is deficient in protein and most other micro-nutrients.

Towards a Healthier Food Basket in Zanzibar

During the February training session, we continued the process begun in September to adjust the representative basket in a way that came closer to meeting daily requirements for key vitamins and minerals and did not raise the cost of the basket. Participants from the Ministry wanted to go further and calculate a basket that was lower cost than the representative basket. The result came much closer to providing a balanced diet.

Adjustments made to the food basket are the following:

- We changed the composition of the basket:
    - We added milk, which was omitted from the representative basket due to its low calorie share
    - We added eggs as another source of calcium
    - We separated vegetables into two groups: leafy greens and tomatoes. These both have negligible calorie shares, but contain significant amounts of key vitamins and minerals, while differing in their nutrient content.
    - We separated fruit into ripe bananas, mangos and papaya, and other fruit. These three groups differ in their nutrient content.
- We replaced white sweet potatoes with orange sweet potatoes and raised the share.

- We reduced the share of fish: while fish is an important source of protein, vitamin C, folic acid, calcium, potassium and other minerals, it is very expensive and is not affordable in sufficient quantities for the lower income quintiles.
- We raised the share of beans to provide a lower cost source of protein and other nutrients provided by fish in the representative basket.
- We raised shares of leafy green vegetables. The group chose to include cassava leaves instead of spinach or other greens. Cassava leaves are more widely available and cheaper.
- We raised the share of fruit and selected papayas rather than mangos, since mangos are rather expensive.
- We reduced the shares of wheat and sugar.
- We raised the share of milk

The new basket provides adequate amounts of most vitamins, which the exceptions of vitamins E and B12, but it still falls short of requirements for calcium and other minerals. It proved particularly challenging to identify a readily available source of calcium.

Table 4: The healthier basket meets requirements for most vitamins…

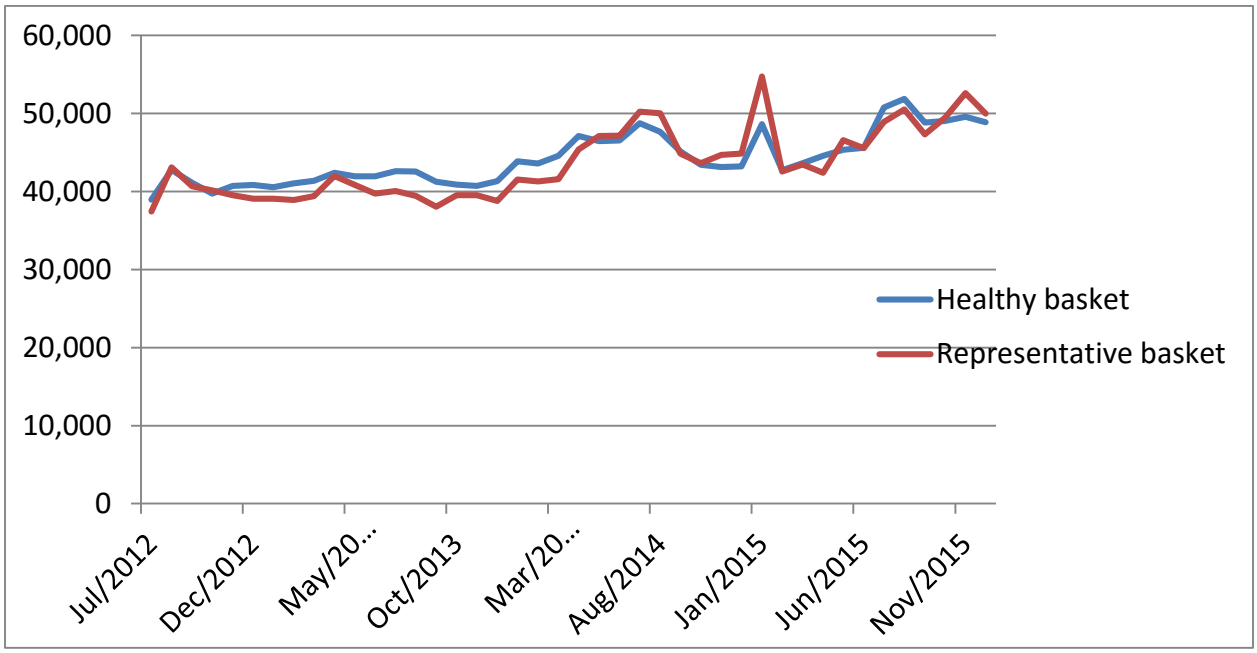
Nutrient	Protein	Vitamin A	Vitamin E	Thiamine	Ribo-flavin	Niacin	Folic acid	Vitamin B12
Unit	grams	mcg	mg	mg	mg	mg	mcg	mcg
Old basket	67.91	189.68	2.93	0.88	0.60	11.27	274.77	0.11
New basket	92.92	899.22	7.52	1.10	1.43	10.99	459.05	1.61
Requirements								
Men	39-46	900	15	1.2	1.3	16	400	2.4
Women	41	700	15	1.1	1.1	14	400	2.4

Table 5: …but still falls short on calcium

Nutrient	Calcium	Phosphorous	Magnesium	Potassium	Sodium	Iron
Unit	mg	mg	mg	mg	mg	mg
Representative	93.06	648.23	263.36	1988.33	102.72	7.54
New basket	466.94	957.59	318.47	2906.12	288.40	9.30
Requirements						
Men	1000	700	410	4700	1500	8
Women	1000	700	315	4700	1500	18

The new, healthier basket is roughly the same cost as the representative basket, as can be seen in figure 1.

Figure 1: Monthly cost of healthier basket is roughly the same as the representative basket



Mainland Tanzania: the Way Forward

ERS has provided training to the Ministry of Agriculture's National Food Security Division (NFSD) in the construction of a set of regional representative food baskets. NFSD analysts had been reluctant to implement the methodology for two reasons:

- The retail prices used to calculate the food basket cost were urban market prices collected by the National Bureau of Statistics (NBS) as part of the monthly calculation of the consumer price index. NFSD staff are concerned that this is not an accurate reflection of prices in rural district markets. They would prefer to use prices from district markets.
- For measuring access, we have been using per capita GDP by region as a proxy for income. We all agree this is not a good proxy, and NFSD would like to develop a more accurate measure of household income in rural areas.

During the week of February 22, USDA and SERA staff worked intensively with three of the NFSD staff to begin the desk study. NFSD participants gathered monthly prices for 2014 and 2015 for the 12 monitored crops from four districts: Morogoro Urban. Mvomero District, Dodoma Urban, and Bahi District. Significant discrepancies were found between these price series and the series provided by NBS and we discussed some possible reasons for the discrepancies. We also examined the feasibility of estimating household income using the results from the Household Economy Approach (HEA), which is currently underway in selected livelihood zones. At the conclusion of this workshop, we agreed on the following plan for moving forward.

The team identified four districts which they will analyze as a pilot:

- Bahi District of Dodoma
- Kilosa District of Morogoro
- Masasi District of Mtwara
- Longido District of Arusha

The team will request monthly market prices from these four districts for 2014 and 2015, as well as January and February 2016 if available. In order to cross check those data, they will also request monthly regional prices from NBS. They will compare the different series and in case of significant discrepancies, they will countercheck with the district market reporters to ask for clarification.

The team will also work further on using the HEA to estimate monthly income for the pilot districts during the reference year. This survey disaggregates the country into a set of *livelihood zones*. There is not an exact one to one correspondence between livelihood zones and districts, but the team was able to identify livelihood zones that largely overlap the pilot districts. The HEA provides average household cash income for different income groups, the sources of income (crop sales, livestock sales, agricultural labor, etc.), and a calendar showing the dominant months during which households can earn income from each source. It is thus possible to determine the seasonal flow of income. The survey also provides the shares of own production in household consumption of major food groups. With that information, one can derive a rough estimate of quantities of food in the food baskets that are purchased and compare purchases to cash income.

We will meet the team again in April to review progress. The team has asked us to support field visits to the pilot districts. But in order for such visits to be productive, the NFSD staff need to clarify the objectives. By completing this pilot study, they will be able to identify data gaps and be in a better position to develop a clear set of objectives and deliverables.

Building a Set of Healthy Regional Food Baskets for the Mainland

We presented the concept of a healthy food basket to both MALF staff and the Tanzania Food and Nutrition Center (TFNC). There was considerable interest in pursuing this. The NFSD carried out semi-annual food security assessments in districts they consider to be vulnerable. To date these assessments have focused exclusively on availability staple food crops (grains, pulses, and roots and tubers). But the staff understand that even when there are abundant supplies of staples, malnutrition is a serious problem, and they are under pressure from several sources to pay more attention to nutrition.

TFNC has active programs to measure malnutrition and provide nutritional education in rural areas. The staff has measures of stunting and incidences of diseases such as pellagra. But calculations of the nutritional content of a representative food basket can help pinpoint exactly which nutrients are deficient and which foods can help provide a better balanced diet. The methodology, by calculating the cost of the food baskets, can also help to promote a diet that is affordable, as well as healthy.

Next Steps

The next USDA visit is planned for the second half of April. I will be accompanied by a nutrition expert from USAID's Bureau of Global Health. The Zanzibar Ministry has requested training in some general nutritional concepts. They would also like assistance building a linear programming model that can automatically generate a low-cost healthy diet. To date, however, attempts to develop such a model have not generated satisfactory results. More work will be needed in this area.

On the mainland, staff from NFSD has agreed to convene a stakeholders meeting during our visit to discuss ideas for integrating the food basket methodology into their program of work. We will review results of the pilot study and discuss ways to move forward. We will hold further discussions with TFNC and other stakeholders to explore options for building a set of healthy food baskets.

Report of the Trip to the Tanzania SERA Project office, March 6–12, 2016, "Food Demand Study", Contract No. 621-C-00-11-00003-00

Chen Zhen, April 2, 2016

Trip Accomplishments

- Met with Tanzania National Bureau of Statistics to discuss price imputation and strata.
- Estimated a censored EASI demand system with 20 food groups, 3 nonfood groups, and a *numéraire* good. When estimated with the 20 food groups and 2 of the 3 nonfood groups, the model was able to converge quickly and the price elasticities are reasonable. Numerical difficulty occurred when all 3 nonfood groups and the *numéraire* good were added to the system. Price collinearity may be a primary contributor to this issue.
- Selected asset and income variables that were used as predictors of total expenditures.
- Implemented an approach for obtaining cluster-robust standard errors for the demand system.
- Discussed possible policy applications for the estimated price elasticities, one of which is to simulate the effect of changing population demographics on future food demand.

Planned Activities

- Diagnose the exact cause(s) for the numerical issues. One problem is that we can't create a good price index for the *numéraire* good using COICOP code-level data because there is too much quality difference within each COICOP code (e.g., bus fare) for the numeraire category. A consumer price index for all nonfood item is available from the Tanzania Bureau of Statistics' website. I will estimate another EASI demand system where prices for the 20 food groups and 3 nonfood groups are deflated by this consumer price index *before* the demand system is estimated. This is equivalent to imposing the homogeneity condition before estimation. (Currently, I estimate the demand system first and then impose homogeneity post-estimation.)
- Estimate the EASI demand using instrumental variables for prices to control for price endogeneity.
- Use the preferred price elasticity estimates to conduct policy simulations.
- Prepare a manuscript for journal publication.
- Timeline for these activities is presented below.

	Apr	May	Jun	Jul
Development of alternative EASI models (homogeneity & instrumental variables)				

Policy simulation	
Journal manuscript	