



**Michigan State University Food Security III
USAID Africa Bureau Associate Award
Applied Research and Outreach in support of CAADP in the
COMESA Region
Progress Report October 2008 - March 2009
April 14, 2009**



1. Introduction

The Michigan State University Food Security Group (FSG) Associate Award with Africa Bureau began in October 2007 and the current phase runs through September 30, 2009. The FSG seeks to achieve the objectives of the agreement through a two-pronged strategy as follows:

- A) Support to COMESA in the preparation of a regional CAADP compact (and selected country compacts when requested), and the identification and implementation of investments and policy reforms at regional and country level to achieve the compact targets;
- B) A joint program of applied research and policy analysis to address gaps in empirical knowledge important to the design of investment programs and/or obtaining buy-in from national governments to policy reform.

This progress report covers the period October 2008 to March 2009. The next section of the report highlights key accomplishments during this period for each component of the approved workplan. Section 3 presents an updated workplan based on discussions with Africa Bureau and COMESA staff in Washington DC in January and February 2009. Section 4 provides a full listing of outreach activities during the period under review. At the request of Africa Bureau, Section 5 presents abstracts for each research activity.

2. Africa Bureau Associate Award Highlights Oct 2008 – Mar 2009

2.1 Appointment of Jan Nijhoff as Regional Coordinator for MSU support to COMESA

In order to provide more effective support to COMESA in the preparation of a regional CAADP compact, and in the preparation and implementation of selected country compacts, FSG sought approval from COMESA and Africa Bureau to fund a proportion of a FSG Regional Coordinator position through the Africa Bureau Associate Award. Mr Jan Nijhoff began his assignment as Regional Coordinator on January 5, and we are grateful to COMESA for providing office accommodation in the Investment Promotion and Private Sector Development Division of the COMESA Secretariat. Mr. Nijhoff is expected to work closely with COMESA's Senior Agricultural Advisor, Dr. Cris Muyunda, as well as with COMESA's appointed regional compact facilitator - FANRPAN. Mr. Nijhoff's support under Africa Bureau was not originally budgeted under the Africa Bureau award, and was initially expected to be funded at 25% out of savings in other areas. In practice his support for COMESA's CAADP activities may require a higher level of effort, and this effort may need to be sustained beyond the end of the current agreement (September 30, 2009).

Following discussions with Africa Bureau and COMESA staff in Washington DC February 25, a revised workplan has been prepared. The revised work plan responds to the following issues raised at the meeting: (a) delays in COMESA authorization of

MSU's FY09 workplan; (b) delays in the preparation of regional and country compact work; and (c) lack of progress by COMESA in implementing the CAADP process. In response to these concerns, MSU has now obtained formal concurrence for the FY09 work plan from COMESA and has brought on Mr. Nijhoff to be based at COMESA in Lusaka to achieve greater day-to-day coordination on the preparation of regional and country compact activities and to assist COMESA in planning its future CAADP-related strategies.

The revised workplan is presented in section 3 of this progress report.

2.2 Outreach Activities

Nine outreach presentations were made during the period covered by the progress report:

- 1) Three presentations were made for the SADC Southern Africa Regional Conference on Agriculture on world food prices and food security policy in the region, the potential for regional maize trade, and fertilizer use promotion strategies;
- 2) Two presentations were made at a COMESA policy workshop on agricultural markets (travel funded by the COMESA African Agricultural Markets Project);
- 3) Three presentations were made for USAID Africa Bureau and other USAID staff in Washington DC on the topics of regional food staples trade, the food pricing and food security situation in Southern and Eastern Africa, and chronic poverty analytics in support of programs to reach the productive poor;
- 4) A presentation was made at the request of the USAID regional mission in Nairobi on recent developments in food staple markets and trade.

Steve Haggblade prepared a background briefing paper for the AU Ministers of Agriculture and Land meeting to be held in April 2009 on the role of the rural non-farm economy in strategies to include the poor into an agriculture-led growth agenda. This paper is one of a series coordinated by Professor Sheryl Hendriks to help operationalize the CAADP Pillar 3 framework.

Full details of these presentations are available in Section 4 of this progress report, and copy of the background paper for the AU Ministers of Agriculture Conference is included as an Appendix.

2.3 Research Outputs

Three research reports were published during the period:

- [Can Cash Transfers Promote Food Security in the Context of Volatile Commodity Prices? A Review of Empirical Evidence.](#) Benjamin Magen, Cynthia Donovan, and Valerie Kelly. MSU IDWP 96, Michigan State University. 2009.

- [The 2008/09 Food Price and Food Security Situation in Eastern and Southern Africa: Implications for Immediate and Longer Run Responses](#). T.S. Jayne, Antony Chapoto, Isaac Minde, Cynthia Donovan. International Development Working Paper #97. Michigan State University. November 7, 2008.
- [Promoting Fertilizer Use in Africa: Current Issues and Empirical Evidence from Malawi, Zambia, and Kenya](#). Isaac Minde, T.S. Jayne, Eric Crawford, Joshua Ariga, and Jones Govereh. Report prepared for Re-SAKSS Southern Africa and the United States Agency for International Development's Africa Bureau. November 24, 2008

At the request of Africa Bureau a set of research abstracts have been prepared and are included in Section 5 of this report.

2.4 Associate Award Website

To facilitate a one-stop access to all research and outreach outputs a dedicated Africa Bureau website is now live at: <http://aec.msu.edu/fs2/afr/index.htm>

3 Updated Workplan for January – September 2009

This updated version of the approved work plan presents planned activities designed to meet the objectives of the AFR-SD Associate Award to FS III for the period January through September 2009 in light of progress made to date. The proposed revisions take account of discussions with Africa Bureau staff in January 2009, and COMESA and Africa Bureau staff in February 2009. The activities and specific outputs associated with them are outlined below using the following three categories:

- C) Support to COMESA in the preparation of a regional CAADP compact, national CAADP compacts, and analysis to provide an empirical foundation for the investments and policy reforms to be included in these regional and national compact.
- D) A joint program of applied research and policy analysis to address gaps in empirical knowledge important to the design of investment programs and/or to obtain buy-in from national governments for policy reform.
- E) Outreach, coordination, and capacity building in support of (a) and (b).

MSU-COMESA Regional Coordinator Posted at COMESA Secretariat

At the request of COMESA, MSU has posted a regional coordinator at the COMESA Secretariat in Lusaka to facilitate interaction and collaboration, and to provide direct technical support. Mr. Jan Nijhoff arrived at post in January 2009 and has been assigned to the CAADP Coordination Office within the Investment Promotion and Private Sector Development Division.

Nijhoff's terms of reference as they relate to support to the CAADP process can be summarized as follows:

1. Assist COMESA in preparing the Regional CAADP Compact:
 - a. Assist COMESA and FANRPAN in preparing a roadmap for the Regional Compact (ongoing, roadmap to be finalized early May 2009);
 - b. Assist in reviewing outputs produced by FANRPAN during the course of its contract with COMESA throughout 2009 (draft Compact document to be finalized by November 2009);
 - c. Participate in key consultations aimed at
 - i. identifying stakeholders (throughout 2009);
 - ii. stocktaking of existing programs (throughout 2009);
 - iii. identifying early action programs (throughout 2009);
 - d. Coordinate specific MSU support to the Regional CAADP Compact, such as
 - i. integration of analytical input from MSU on Pillars 2 and 3 (Output 2 of the original 07-09 Work Plan);
 - ii. contributions to the design of early actions and investments to promote regional trade in food staples and agricultural inputs (Output 3 of the original 07-09 Work Plan) (July-October)
 - e. Assist in the preparation of draft Compact documentation (October-November, 2009)
 - f. Assist in finalizing the Compact (into 2010).
2. Coordinate a review of COMESA's draft Common Agricultural Policy (CAP) and assist COMESA in preparing a final version (Output 4 of the original 07-09 Work Plan) (May-August)
3. Coordinate MSU support to key Country Compact processes (part of Output 12 of the original 07-09 Work Plan), particularly in Zambia (ongoing), and most likely in Kenya, Uganda, and Burundi, and assist COMESA in convening consultations and preparing the actual Compacts (throughout 2009, and likely into 2010).

A. Support to COMESA in Preparation of CAADP Compact

In February 2009, COMESA awarded the preparation of its regional compact to FANRPAN. An Inception Report was submitted by FANRPAN in March, and a road map for the Regional CAADP Compact process will be finalized after initial stakeholder consultations in late April or early May 2009.

FANRPAN has requested that MSU staff assist in the design of this regional CAADP compact. MSU team members will participate together with other Expert Reference Group (ERG) members and government representatives appointed by FANRPAN according to the completion schedule worked out by COMESA and FANRPAN. MSU team member Nijhoff has been specifically requested to provide technical support, working with the COMESA CAADP team and FANRPAN.

In addition, COMESA is in the process of designating teams to be responsible for developing regional Pillar documents to provide guidance to the national and regional teams in the preparation of their compacts. MSU has been informed that it will be asked

to be the lead international partner to assist COMESA in the design of the regional documents for Pillars 2 and 3. MSU team members will participate together with other ERG members appointed for Pillars 2 and 3. The following outputs are anticipated:

Output 1: Revised COMESA CAADP Pillar 2 and 3 documents prepared by COMESA with input from MSU, and circulated for review. Team members: Haggblade, Jayne, Boughton, Tschirley.

Output 2: Final Pillar 2 and 3 documents integrated into overall COMESA regional CAADP compact (led by FANRPAN and to be completed according to timetable to be determined by COMESA). Team members: Jayne, Haggblade, Boughton, Tschirley.

Output 3: MSU team members contribute to design of early actions and investments to promote regional trade in food staples and agricultural inputs as identified by COMESA in the process of compact design (on-going, with the timing of specific early actions determined by COMESA). Potential examples include regional staples trade investment program design, regional cassava value chain development program design, and regional agricultural input market development. Team members: Haggblade, Tschirley, Boughton, Jayne, Kelly.

Output 4: Preparation of a draft COMESA Common Agricultural Policy (CAP). This document will harmonize existing policy documents into a common framework to serve as the basis for country-level outreach and capacity-building efforts led by COMESA. The CAP will require consultation among member states, and ratification by the COMESA the Ministers of Agriculture, and the COMESA Council of Ministers. Team members: Nijhoff, Haggblade, Jayne.

B. Applied Research and Policy Analysis

The following set of research and analysis activities seek to address crucial gaps in the empirical knowledge base that need to be filled in order to design more effective investment programs and achieve national buy-in for policy reforms that support expanded regional trade in food staples, improve the design of emergency response and social protection programs, and increase the demand for fertilizer and improved seed. The description of each analytical report presents an abstract of the study, team members, and completion date.

B.1 Regional trade in food staples

Output 5: Comparison of maize price volatility in closed (Malawi, Zambia) and open trade regimes (Mozambique, Mali, Kenya)

Instability in staple food markets remains a major problem in developing countries. Events in 2008 have compounded fears about the impacts of higher and more volatile food prices in world markets. African governments use a variety of pricing, marketing, and trade policy tools to influence and stabilize staple food market prices. However, the ad hoc and discretionary nature of these policies may introduce a great deal of uncertainty for participants in the marketing system, with unclear implications for overall market

price volatility. There remains a dearth of empirical evidence in Africa to assess the overall impact of trade policy on food price predictability. This paper empirically assesses the degree of staple food price volatility in Malawi, Mozambique, Mali, Kenya, and Zambia. These case countries provide the potential to generate important policy-relevant insights. Since the introduction of the East African Commission in January 2005, Kenya has adopted a stable trade policy regime and a relatively predictable role for government operations in domestic markets. Mozambique and Mali have also pursued a fairly stable and open staple food trade and marketing policy environment. By contrast, Zambia and Malawi use a variety of *ad hoc* domestic marketing and external trade policy tools to stabilize prices. Preliminary results show that Malawi and Zambia have the highest level of food price volatility among the five countries, while Mali has the lowest. Finally, we find that Kenya's elimination of the maize import tariff from neighboring countries in the region in 2005 has stabilized prices but not affected their mean level.

Team members: Jayne, Chapoto. Expected completion: Draft report 4th quarter of calendar 2008 (4Q08); final report to be completed July 2009.

Output 6: Buffering Food Price Shocks through Cross-Border Trade: Cross-country comparisons in Eastern and Southern Africa assessing the impact of open and closed borders in moderating food price shocks and maize availability.

In an environment in which markets work well and there are no barriers to regional trade, the import parity price sets an upper limit on domestic price movements. But in practice, particularly in crisis years such as 2008, domestic prices have often exceeded import parity levels, leading domestic prices to become more volatile than world prices. Some groups (often government policy makers) attribute these failures to market failure. Others (often private traders) contend that instances of market breakdown result primarily from government policy failures. This paper reviews empirical evidence for half a dozen countries in Eastern and Southern African countries over the past 15 years in order to identify instances where cross-border trade has succeeded as well as circumstances under which trade has failed to cap domestic price rises at import parity. By comparing these differing outcomes, the paper aims to identify conditions under which cross-border trade can and cannot effectively moderate food price volatility in the region. Year 2. Team members: Haggblade, Jayne and Dorosh (IFPRI) . Expected completion: 2Q09.

Output 7: Determinants of Smallholder Participation in Africa Food Staple Markets: the Case of Maize in Southern and Eastern Africa

While there is a strong consensus about the importance of investments in efficient food staple markets, there is less certainty about the question as to how poor rural households can benefit from them. In this paper we explore that question by looking at maize market participation by smallholders in Kenya, Mozambique and Zambia with different asset endowments, in different production systems, and in good and bad production years. In particular we are concerned as to whether investments in public goods that make markets

more efficient are likely to benefit the majority of households, or whether there is some minimum set of farm assets that are needed to enable rural household to benefit from those public goods in a significant way? If the former case is correct then policymakers can focus exclusively on public goods, but will still be interested in what *kinds* of public investments are of most relevance to the poor. In the latter case there may be a need for greater public-private coordination of investment strategies to enable more smallholders to achieve the necessary asset levels to benefit from public good investments.

Team members: Boughton, Jayne, Mather. Expected Completion: June 2009.

B.2 Integrating market analysis into the design of emergency response and social protection

Output 8: Can cash transfers promote food security in the context of volatile commodity prices? A review of empirical evidence

This working paper synthesizes the theoretical and empirical literature on the use of cash transfers in response to food crisis situations, with particular attention to their use in situations that are exacerbated by volatile, often inflationary, commodity prices. The paper is designed for policymakers who are wondering if cash transfers might be an appropriate instrument in the context of 2008's unstable commodity prices for both food and energy, but are unfamiliar with the literature and discussions surrounding the cash vs. food debate. After defining some key terms and presenting a brief review of the theory behind cash transfer use, the paper synthesizes evidence from studies that have evaluated past cash transfer programs. While the focus is on examples from sub-Saharan Africa (Malawi, Mozambique, Zambia, Kenya), there are also valuable lessons incorporated from other regions of the world.

Cash transfers can be a more effective tool than in-kind food aid for fighting food insecurity in conditions where markets function well. A cash transfer program combined with other forms of assistance can lead to high beneficiary satisfaction and economic growth. Systematic monitoring of events and evaluation of impacts is needed to ensure that cash transfer programs have the desired impacts and are well integrated with other forms of food security assistance. Rather than assuming a rigid single response of cash only or in-kind only, a combination of response options for different households in different environments may be the most efficient strategy. This requires both capable administrators and flexibility of program implementation.

Team members: Magen, Kelly, Donovan. Completed: January, 2009. on-line at: [Can Cash Transfers Promote Food Security in the Context of Volatile Commodity Prices? A Review of Empirical Evidence.](#)

Output 9: Spatial Patterns of Food Staple Production, Marketing, and Trade in Southern Africa: Implications for Trade Policy and Emergency Response

This research report is the first part of an effort that will eventually encompass the entire COMESA region and incorporate a broader set of spatial information. In this first effort, we bring together data from a variety of sources to generate a detailed picture of rural and urban population settlement patterns, and volumes of maize and cassava production, sales, purchases, and market flows during stylized years ("good", "normal", and "bad") in Zambia, Malawi, and Mozambique. Data for estimating production, purchases, and sales come from MSU's collaborative (with national statistical agencies) rural household panel surveys in Zambia and Mozambique, its collaborative urban survey in four cities of Zambia, LSMS data for urban and rural areas in Malawi, and LSMS data for urban Mozambique. This is combined with highly disaggregated population settlement data from Gridded Population of the World (GPW), Global Rural-Urban Mapping Project (GRUMP), and LandScan (Oak Ridge National Laboratory's Global Population Project). Information on trade flows comes from extensive interviews with traders in the region augmented with data from FEWSNet's informal trade monitoring system and SAGIS/South Africa. This portion of the mapping takes a broader regional approach, showing inflows and outflows beyond the three focus countries

These maps form the foundation for insights in two broad areas: trade policy and the gains from trade, and choice of resource in emergency response. Given that surplus food production zones often lie across international borders from the deficit markets they most economically serve, these spatial maps will provide the basis for more formal economic modeling work in the future as well as a powerful visual presentation tool for describing these trade opportunities to regional policy makers. For analysis of emergency response options, the maps will be complemented by information about the typical geographic location of food crises and the characteristics of households in those areas, including their income levels and sources, asset levels, and the extent to which they rely on markets (or not) as a regular part of their strategy for ensuring food security. Implications will be drawn regarding the relative advantages of cash compared to in-kind food in emergency response, and regarding the risks and advantages of using locally procured food when in-kind food is desired.

Team members: Steve Haggblade, David Tschirley, and Steve Longabaugh
Expected completion: June 2009.

Output 10: The 2008/09 Food Pricing and Food Security Situation in Eastern and Southern Africa: Implications for Immediate and Longer-Run Responses.

The dramatic rise in world food prices since 2007 has commanded the world's attention. However, since July 2008, world food prices have fallen almost as rapidly as they had risen. Yet as is demonstrated in this report, domestic food price levels in many eastern and southern African markets have not declined along with world prices, and the specter

of food crises have loomed again in early 2009. Against this backdrop, there is an urgent need for information about how the current food situation is unfolding in the region, the immediate policy response options, and the longer-term challenges and opportunities.

This study has three objectives: 1) to examine the impact of recent world food price changes on domestic maize and fertilizer prices in the region; 2) to assess possible changes in cropping patterns, national food production, and consumers' access to food in light of these price movements; and 3) to consider the implications for policy and program response by governments, donors, and the private sector.

Team members: Jayne, Chapoto, Minde, Donovan. Completed: November 2008.
downloadable at: [The 2008/09 Food Pricing and Food Security Situation in Eastern and Southern Africa: Implications for Immediate and Longer-Run Responses.](#)

Note: A supplemental update of this report, highlighting lessons learned from the 2008/09 crisis in southern Africa is scheduled for completion May 2009.

B.3 Fertilizer and Related Input Market Growth

Output 11: Cross-country study (for Kenya, Zambia, Malawi) of benefits, costs, and distributional effects of fertilizer promotion programs.

The purpose of this paper is to synthesize experiences with recent fertilizer promotion approaches in Malawi, Zambia, and Kenya, involving both subsidized distribution and development of private sector input markets. The aim is to contribute empirically based insights about when to invest in fertilizer promotion programs, including those with a significant subsidy element, and about how best to design and implement them. As background before synthesizing experiences across the three countries, the report draws briefly from the extensive recent debate about the case for and against fertilizer subsidies and how to make them more effective. We focus on four salient questions: (i) What are the guiding principles of a “smart” fertilizer subsidy program, and what determines its costs and benefits? (ii) What has been the experience of Malawi and Zambia with fertilizer subsidy programs—their achievements and limitations—and what lessons can be drawn for the design of future subsidy programs that would contribute most effectively to national food security and smallholder productivity? (iii) What can be learned from Kenya’s experience of rapid smallholder adoption of fertilizer without subsidies? and (iv) how do the sharply higher world food and fertilizer prices affect the justification for fertilizer subsidies in the region?

Team members: Minde, Jayne, Govereh, Crawford. Completed: Q4 2008. downloadable at: [Promoting Fertilizer Use in Africa: Current Issues and Empirical Evidence from Malawi, Zambia, and Kenya.](#)

Output 12: Preparation of evidence-based policy synthesis on strategies to promote fertilizer use and farm productivity; contributions to COMESA and ReSAKSS policy briefs and policy discussions. Team members: as for Output 11. Completion: November 2008. downloadable at: [Promoting Fertilizer Use in Africa: Current Issues and Empirical Evidence from Malawi, Zambia, and Kenya](#). Isaac Minde, T.S. Jayne, Eric Crawford, Joshua Ariga, and Jones Govereh. October 2008. MSU Policy Synthesis #83.

C. Outreach, Coordination and Capacity Building

For the following activities, team members will include Haggblade, Jayne, Boughton, Nijhoff, and other FSG faculty. Expected completion: continuous as appropriate given the COMESA work calendar.

- Outreach will be conducted during trips made to the region to participate in planning sessions with COMESA and other national partner organizations.
- Coordination and direct interaction with COMESA will be facilitated by the presence of the MSU coordinator at the COMESA Secretariat. Joint annual work plans will be prepared, and coordination will take place with Re-SAKSS and other CAADP support mechanisms on related analysis and outreach activities.
- Capacity building will be achieved as a joint product of the applied research and outreach activities.

4. Outreach Activities October 2008 – March 2009

Thomas Jayne, Antony Chapoto, Isaac Minde, Cynthia Donovan and Femi Olubude-Awosola. Presentation made at the Southern Africa Regional Conference on Agriculture. Grand Palm Hotel, Gaborone, Botswana. 8-9 December 2009. *“Rising World Food Prices and their Implications for Food Security Policy in Southern Africa.”* [http://www.aec.msu.edu/fs2/outreach/Isaac Minde Presentation SADC Conference.pdf](http://www.aec.msu.edu/fs2/outreach/Isaac_Minde_Presentation_SADC_Conference.pdf)

Steven Haggblade, Thomas Jayne, David Tschirley and Steve Longabaugh. Presentation made by M.T. Weber at the SADC Southern Africa Regional Conference on Agriculture. Grand Palm Hotel, Gaborone, Botswana, December 8-9, 2008. *“Potential for Intra-Regional Maize Trade in Southern Africa: an Analysis for Zambia at the Sub-National Level.”* [http://www.aec.msu.edu/fs2/zambia/haggblade_inreg_trade SA Zambia Perspective_mtw.pdf](http://www.aec.msu.edu/fs2/zambia/haggblade_inreg_trade_SA_Zambia_Perspective_mtw.pdf)

Isaac Minde, T.S. Jayne, Joshua Ariga, Jones Govereh, and Eric Crawford. Presentation made at the Southern Africa Regional Conference on Agriculture “Theme: Agriculture-led Development for Southern Africa: Strategic Investment Priorities for Halving Hunger and Poverty by 2015”. Grand Palm Hotel, Gaborone, 8-9 December, 2008. *“Promoting Fertilizer Use in Africa: Current Issues and Empirical Evidence from Malawi, Zambia, and Kenya.”* [http://www.aec.msu.edu/fs2/zambia/Jones SARCA fert Gaborone Dec-8-2008.pdf](http://www.aec.msu.edu/fs2/zambia/Jones_SARCA_fert_Gaborone_Dec-8-2008.pdf)

T.S. Jayne, A. Chapoto, I. Minde, and C. Donovan. Presentation made at the African Agricultural Markets Policy Workshop Sponsored by the Common Market for Eastern and Southern Africa (COMESA). Nairobi, Kenya, December 11, 2008. “*The 2008/09 Food Pricing and Food Security Situation in Eastern and Southern Africa: Implications for Immediate and Longer-Run Responses.*”

http://www.aec.msu.edu/fs2/outreach/Jayne_COMESA-AAMP-Dec_11_08.pdf

Steven Haggblade. Presentation made to USAID Washington. January 13, 2009.

“*Regional Trade in Food Staples: Stimulating Agricultural Growth and Improving Food Security in Eastern and Southern Africa.*”

http://www.aec.msu.edu/fs2/outreach/usaids_regional_trade_jan_2009.pdf

T. Jayne, A. Chapoto, I. Minde, and C. Donovan. Presentation made at the USAID Africa Bureau seminar on Agricultural Markets. Washington, D.C., January 13, 2009. “*The 2008/09 Food Pricing and Food Security Situation in Eastern and Southern Africa: Implications for Immediate and Longer Run Responses.*”

http://www.aec.msu.edu/fs2/outreach/Jayne_USAID_Jan_13_2009.pdf

David Tschirley. Presentation made at a discussion group meeting on identifying the potentially productive poor and designing programs to reach them organized by USAID/AFR Washington, D.C. 12 February 2009. “*Chronic Poverty Analytics*”.

<http://www.aec.msu.edu/fs2/outreach/Vulnerability-Tschirley.pdf>

David Tschirley. Presentation made at the "Eastern Africa Regional Meeting Global Food Security Response". USAID Mission, Nairobi, March 18 – 20, 2009. “*Recent Work on Food Staple Markets and Regional Trade*”.

5. Research Output Abstracts and Timelines

Please see Associate Award Website for completed papers:

<http://aec.msu.edu/fs2/afr/index.htm>

Output 5: **Comparison of maize price volatility in closed (Malawi, Zambia) and open trade regimes (Mozambique, Mali, Kenya)**

Team members: Chapoto, Jayne . Expected Completion: June, 2009.

Instability in staple food markets remains a major problem in developing countries. Events in 2008 have compounded fears about the impacts of higher and more volatile food prices in world markets. African governments use a variety of pricing, marketing, and trade policy tools to influence and stabilize staple food market prices. However, the ad hoc and discretionary nature of these policies may introduce a great deal of uncertainty for participants in the marketing system, with unclear implications for overall market price volatility. There remains a dearth of empirical evidence in Africa to assess the overall impact of trade policy on food price predictability. This paper empirically assesses the degree of staple food price volatility in Malawi, Mozambique, Mali, Kenya,

and Zambia. These case countries provide the potential to generate important policy-relevant insights. Since the introduction of the East African Commission in January 2005, Kenya has adopted a stable trade policy regime and a relatively predictable role for government operations in domestic markets. Mozambique and Mali have also pursued a fairly stable and open staple food trade and marketing policy environment. By contrast, Zambia and Malawi use a variety of *ad hoc* domestic marketing and external trade policy tools to stabilize prices. Preliminary results show that Malawi and Zambia have the highest level of food price volatility among the five countries, while Mali has the lowest. Finally, we find that Kenya's elimination of the maize import tariff from neighboring countries in the region in 2005 has stabilized prices but not affected their mean level.

Output 6: **Buffering Food Price Shocks through Cross-Border Trade: Cross-country comparisons in Eastern and Southern Africa assessing the impact of open and closed borders in moderating food price shocks and maize availability.**

Team members: Haggblade, Jayne and Dorosh (IFPRI). Expected Completion: June, 2009.

In theory, cross-border trade moderates domestic food price volatility. Under open borders, the import parity price sets an upper bound and export parity price sets a lower bound on domestic price movements. But in practice, particularly in crisis years such as 2008, domestic prices sometimes puncture international price bands, leading domestic prices to become more volatile than world prices. Some groups (often government policy makers) attribute these failures to market failure. Others (often private traders) contend that instances of market breakdown result primarily from government policy failures. This paper reviews empirical evidence for half a dozen countries in Eastern and Southern African countries over the past 15 years in order to identify instances where cross-border trade has succeeded as well as circumstances under which trade has failed to cap domestic price rises at import parity. By comparing these differing outcomes, the paper aims to identify conditions under which cross-border trade can and cannot effectively moderate food price volatility in the region.

Output 7: **Determinants of Smallholder Participation in Africa Food Staple Markets: the Case of Maize in Southern and Eastern Africa**

Team members: Boughton, Jayne, Mather. Expected Completion: June 2009.

While there is a strong consensus about the importance of investments in efficient food staple markets, there is less certainty about the question as to how poor rural households can benefit from them. In this paper we explore that question by looking at maize market participation by smallholders in Kenya, Mozambique and Zambia with different asset endowments, in different production systems, and in good and bad production years. In particular we are concerned as to whether investments in public goods that make markets

more efficient are likely to benefit the majority of households, or whether there is some minimum set of farm assets that are needed to enable rural household to benefit from those public goods in a significant way? If the former case is correct then policymakers can focus exclusively on public goods, but will still be interested in what *kinds* of public investments are of most relevance to the poor. In the latter case there may be a need for greater public-private coordination of investment strategies to enable more smallholders to achieve the necessary asset levels to benefit from public good investments.

Output 8: ***Can cash transfers promote food security in the context of volatile commodity prices? A review of empirical evidence***

Team members: Magen, Kelly, Donovan. Completed: January, 2009.

This working paper synthesizes the theoretical and empirical literature on the use of cash transfers in response to food crisis situations, with particular attention to their use in situations that are exacerbated by volatile, often inflationary, commodity prices. The paper is designed for policymakers who are wondering if cash transfers might be an appropriate instrument in the context of 2008's unstable commodity prices for both food and energy, but are unfamiliar with the literature and discussions surrounding the cash vs. food debate. After defining some key terms and presenting a brief review of the theory behind cash transfer use, the paper synthesizes evidence from studies that have evaluated past cash transfer programs. While the focus is on examples from sub-Saharan Africa (Malawi, Mozambique, Zambia, Kenya), there are also valuable lessons incorporated from other regions of the world.

Cash transfers can be a more effective tool than in-kind food aid for fighting food insecurity in conditions where markets function well. A cash transfer program combined with other forms of assistance can lead to high beneficiary satisfaction and economic growth. Systematic monitoring of events and evaluation of impacts is needed to ensure that cash transfer programs have the desired impacts and are well integrated with other forms of food security assistance. Rather than assuming a rigid single response of cash only or in-kind only, a combination of response options for different households in different environments may be the most efficient strategy. This requires both capable administrators and flexibility of program implementation.

Output 9: **Spatial Patterns of Food Staple Production, Marketing, and Trade in Southern Africa: Implications for Trade Policy and Emergency Response**

Team members: Steve Haggblade, David Tschirley, and Steve Longabaugh
Expected completion June 2009.

This research report is the first part of an effort that will eventually encompass the entire COMESA region and incorporate a broader set of spatial information. In this first effort, we bring together data from a variety of sources to generate a detailed picture of rural and urban population settlement patterns, and volumes of maize and cassava production,

sales, purchases, and market flows during stylized years ("good", "normal", and "bad") in Zambia, Malawi, and Mozambique. Data for estimating production, purchases, and sales come from MSU's collaborative (with national statistical agencies) rural household panel surveys in Zambia and Mozambique, its collaborative urban survey in four cities of Zambia, LSMS data for urban and rural areas in Malawi, and LSMS data for urban Mozambique. This is combined with highly disaggregated population settlement data from Gridded Population of the World (GPW), Global Rural-Urban Mapping Project (GRUMP), and LandScan (Oak Ridge National Laboratory's Global Population Project). Information on trade flows comes from extensive interviews with traders in the region augmented with data from FEWSNet's informal trade monitoring system and SAGIS/South Africa. This portion of the mapping takes a broader regional approach, showing inflows and outflows beyond the three focus countries

These maps form the foundation for insights in two broad areas: trade policy and the gains from trade, and choice of resource in emergency response. Given that surplus food production zones often lie across international borders from the deficit markets they most economically serve, these spatial maps will provide the basis for more formal economic modeling work in the future as well as a powerful visual presentation tool for describing these trade opportunities to regional policy makers. For analysis of emergency response options, the maps will be complemented by information about the typical geographic location of food crises and the characteristics of households in those areas, including their income levels and sources, asset levels, and the extent to which they rely on markets (or not) as a regular part of their strategy for ensuring food security. Implications will be drawn regarding the relative advantages of cash compared to in-kind food in emergency response, and regarding the risks and advantages of using locally procured food when in-kind food is desired.

Output 10: Impacts of rising food and fertilizer prices on food security.

Team members: Jayne, Chapoto, Minde and Donovan. Completed January 2009

The dramatic rise in world food prices since 2007 has commanded the world's attention. However, since July 2008, world food prices have fallen almost as rapidly as they had risen. Yet as is demonstrated in this report, domestic food price levels in many eastern and southern African markets have not declined along with world prices, and the specter of food crises are once again looming in early 2009. Against this backdrop, there is an urgent need for information about how the current food situation is unfolding in the region, the immediate policy response options, and the longer-term challenges and opportunities.

This study has three objectives: 1) to examine the impact of recent world food price changes on domestic maize and fertilizer prices in the region; 2) to assess possible changes in cropping patterns, national food production, and consumers' access to food in light of these price movements; and 3) to consider the implications for policy and program response by governments, donors, and the private sector.

The report highlights seven main findings:

1. *While world and South African maize prices have plunged precipitously between August and December 2008, this decline has not been reflected at all in the eastern and southern African markets examined.* In parts of the region, most notably Malawi, maize prices are now substantially higher than the cost of importing maize from South Africa, yet imports are not occurring. While the rise in world food prices had an undeniable impact on maize prices in the region up till mid-2008, the continued rise in food prices in countries such as Malawi, Kenya, Zambia, and Mozambique during the latter half of 2008 is primarily due to local policy-related factors. The specific factors vary somewhat by country but are generally (a) policy barriers on the importation of maize; (b) late government response to information indicating the need to import maize; (c) lack of transparency and apparent high-level corruption over importation decisions in the case of Kenya; and (d) inaccurate food balance sheet estimates, including the apparent overestimation of maize production and underestimation of demand.

2. *There is some evidence of a potential food crisis emerging in Zambia and possibly Malawi in early 2009, not because of world food price levels, but because of potential physical shortages which have sent maize prices sharply higher.* In both countries, maize imports may be required to avoid rationing of government stocks. Maize retail maize grain prices in Zambian markets, as of January 2009, are in the range of US\$450 per ton; in central and southern Malawi, maize prices have surpassed \$500 per ton. Despite the gains in consumer welfare that would result from importing maize at this time, the issuing of licenses for maize importation has only been given in Zambia since December 2008 and has still not occurred in Malawi as of January 2008.

3. *Opportunities to relieve maize deficits in the region and partially stabilize prices are being hindered by barriers to regional trade.* Regional trade could be playing a larger role in delivering maize supplies to areas of the region where prices have escalated the most. Zambia, Malawi, and Tanzania have all imposed export bans or trade restrictions on maize over the past 24 months to protect domestic supplies. Another major impediment to private sector maize importation is the threat that government will import and release its stocks at prices below the cost of importation. Because such a move could impose large financial losses on traders, consultation and trust between the public and private sectors is needed to effectively avert the potential for food crises during times of national production shortfalls.

4. *Events in 2007 and 2008 are underscoring the crucial importance of timely and accurate food balance sheet estimates and market information systems.* It is becoming increasingly clear that national crop estimates in some countries are unreliable. Price stability in the region requires accurate crop forecasts so that other plans, such as export volumes, quantities to be purchased by the World Food Programme through local and regional purchase operations, and state marketing board purchases and stock releases, can be made without having unexpected effects on prices.

5. *There will almost definitely be a major drop in fertilizer use on staple food crops in the region in 2008.* Relatively low maize-fertilizer price ratios in 2008 are likely to produce several unwelcome outcomes: (a) less fertilizer used on maize and other crops in the coming cropping season; (b) lower maize yields and production, other factors constant; (c) continued upward pressure on maize prices, even in countries that so far have not experienced major price increases; and (d) a possible shift in area out of crops that require heavy fertilization for profitability and into crops that are profitable even at low or no fertilizer use (e.g., a partial shift into roots and tubers at the expense of maize in the mixed cassava/maize zones, and a shift out of fertilizer-intensive cash crops such as tobacco and tea). The impact of lower fertilizer use on maize production and marketed supplies will be most discernable in countries that make relatively intensive use of fertilizer such as Kenya and least so in countries where fertilizer use on maize is negligible, such as Mozambique.

6. *High fertilizer prices in 2008 are likely to contribute to high food prices in 2009 in the region, even if world food prices continue to decline.* On the surface, it may be expected that the rapid decline in world food prices since mid-2008 should start to put downward pressure on maize prices in eastern and southern Africa. However, to the extent that very high fertilizer prices cause a major reduction in fertilizer use and maize production in the region, the price surface in many parts of the region may remain at import parity levels throughout much of 2009, or even above import parity levels if trade policy barriers and/or trade policy uncertainty remain in place.

7. *The main implications for governments and donors are that the fundamental priorities that have always been the major drivers of agricultural productivity growth and food security remain front and center today.* While high food prices are in some quarters being perceived as a “crisis”, in the long run, higher average food prices may bring major opportunities to attract investment in food production and marketing in the region to expand agricultural growth. However, exploiting these opportunities will require a hospitable and predictable investment climate, and moving toward this hospitable investment climate will require some governments in the region to adopt more stable, predictable and transparent behavior in food and input markets.

Output 11: Cross-country study (for Kenya, Zambia, Malawi) of benefits, costs, and distributional effects of fertilizer promotion programs.

Team members: Minde, Jayne, Crawford, Ariga and Govereh. Completed November 2008.

The purpose of this paper is to synthesize experiences with recent fertilizer promotion approaches in Malawi, Zambia, and Kenya, involving both subsidized distribution and development of private sector input markets. The aim is to contribute empirically based insights about when to invest in fertilizer promotion programs, including those with a significant subsidy element, and about how best to design and implement them. As background before synthesizing experiences across the three countries, the report draws

briefly from the extensive recent debate about the case for and against fertilizer subsidies and how to make them more effective. We focus on four salient questions: (i) What are the guiding principles of a “smart” fertilizer subsidy program, and what determines its costs and benefits? (ii) What has been the experience of Malawi and Zambia with fertilizer subsidy programs—their achievements and limitations—and what lessons can be drawn for the design of future subsidy programs that would contribute most effectively to national food security and smallholder productivity? (iii) What can be learned from Kenya’s experience of rapid smallholder adoption of fertilizer without subsidies? and (iv) how do the sharply higher world food and fertilizer prices affect the justification for fertilizer subsidies in the region?

Appendix 1.
Background Paper for Agriculture and Lands
African Ministers Meeting, April 2009

Bringing the Poor into a Growth Agenda What Role for Africa's Rural Nonfarm Economy?

By Steven Haggblade

How important is the rural nonfarm economy to Africa's poor?

Across rural Africa, nonagricultural earnings account for roughly one-third of total income (Table 1). Highly seasonal, nonfarm activity fills in labor troughs in the agricultural calendar (Figure 1). Despite a common emphasis on rural industries, manufacturing typically accounts for only 20-25% of rural nonfarm employment, while trade, transport, construction and other services account for 75-80%. Apart from sorghum beer brewing, rural manufacturing remains limited across most of Africa. Remittances from urban areas prove important in some locations, particularly in areas with large mining labor exports. But, over all, local rural services, commercial and other business activity account for 80% of rural nonfarm earnings (Table 1).

Policy interest in the rural nonfarm economy arises because of the large scale of nonagricultural earnings, because of its frequently low capital requirements and because of its consequent ability to employ large numbers of poor rural workers. Indeed, many poor laborers work in rural nonfarm activities. But so, too, do many skilled, well-off workers. This duality arises because the rural nonfarm economy houses a highly heterogeneous collection of trading, agroprocessing, commercial, manufacturing and service activities. The scale of individual rural nonfarm businesses varies enormously, from part-time self-employment in household-based cottage industries to large-scale agroprocessing and warehousing facilities operated by large multinational firms. The enormous variety of rural nonfarm activities results in widely varying productivity and profitability (Table 2). Returns vary substantially, normally as a function of differing physical and human capital requirements. Poor men and women dominate low-return activities, such as daily wage labor, small-scale trading and unskilled wage labor used in construction, portering and many personal services. In contrast, white-collar jobs in teaching, medicine, accounting and administration figure most prominently among higher-income households. Because of the differing equity impact of its various components and because of the differing composition of nonfarm activity across settings, the overall impact of nonfarm earnings on rural income distribution remains mixed (Table 3). As a result, the rural nonfarm economy remains bifurcated, with high-productivity nonfarm pursuits dominated by educated workers and those with financial capital, while the unskilled and immobile, often female, workers predominate in the low-productivity segment of the rural nonfarm economy.

What drives rural nonfarm growth?

Two principal motors drive growth of the rural nonfarm economy. In the early stages of economic development, agricultural growth largely governs the magnitude and rural nonfarm opportunities through a variety of consumption, production, labor and capital market linkages. At later stages of economic growth, as in much of East Asia, urban and export markets come to dominate as drivers of rural nonfarm growth. Today, across most of Africa, agricultural growth linkages dominate as the driver of rural nonfarm growth.

Studies of agricultural growth linkages, from a variety of African countries, suggest that every dollar of increased agricultural income generates roughly an additional 30 to 50 cents in rural nonfarm earnings (Haggblade, Hazell and Dorosh, 2007). Demand linkages from prosperous farm households stimulate consumer demand for rural services such as education, construction, entertainment, transport and personal services, while increased output opens new opportunities for rural agro-processing and trade. Many of the nonfarm spinoffs from agricultural growth cluster in rural towns (Table 4).

Where demand for agricultural labor increases, with growing intensity of agricultural production, nonfarm wages rise as well. These labor market linkages drive nonfarm workers into increasingly higher return nonfarm pursuits. Capital market linkages accelerate these mutually reinforcing interactions between agriculture and the rural nonfarm economy. While nonfarm activity benefits from growing demand as agricultural incomes rise, higher nonfarm earnings in turn feed back and accelerate agricultural growth by providing seasonal financing for agricultural inputs necessary to further raise farm productivity. As a result, agriculture and rural nonfarm productivity typically move together, either upwards in a mutually reinforcing ascending spiral or in an immiserizing, mutually reinforcing downward vortex.

Policy implications

The foundation of an effective strategy for stimulating rapid growth in rural nonfarm income centers on promoting productivity growth in smallholder agriculture. Indeed, regions with stagnant agricultural performance typically see workers pushed into increasingly low-return nonfarm activities and outmigration. Yet in regions where agriculture has grown robustly, the rural nonfarm economy has also typically enjoyed rapid growth. But the composition of agricultural growth matters as well. Evidence from a variety of settings suggests that broad-based agricultural growth leads to higher local spending on rural nonfarm goods and services. In contrast, growth in large-scale commercial agriculture typically generates economic linkages with urban centers which supply services, imported farm equipment and consumer goods demanded by wealthy commercial farmers.

Secondly, investment in rural town infrastructure can accelerate the growth and productivity nonfarm activity in rural regions. To exploit economies of scale and scope, many nonfarm commercial and service activities cluster in small towns within agricultural regions. Moreover, because of significant economies of scale in the supply of power, communication, water and sanitation services, public investments in rural town infrastructure can generate high payoffs in terms of facilitating rural nonfarm growth. A conscious policy of building up basic infrastructure in rural service centers will bolster not only nonfarm business opportunities but also farm productivity by deepening the network of agro-dealers that supply inputs and market outputs of surrounding farm households.

Finally, long-term investments in rural education and health are required to enhance the human capital and upward mobility of the rural poor. A growing rural nonfarm economy does not, by itself, guarantee access by the poor. For nonfarm earnings to offer a pathway out of poverty, rural households and policy makers must invest in rural education and health in order to improve the human capital stock of the poor. At the same time policy makers will need to remove

economic and social barriers that limit poor peoples' entry into lucrative nonfarm professions. Fluid labor markets, with good transport and communication systems connecting rural households to regional and urban labor markets, will provide a key bridge linking the rural poor to growing opportunities in the rural nonfarm economy.

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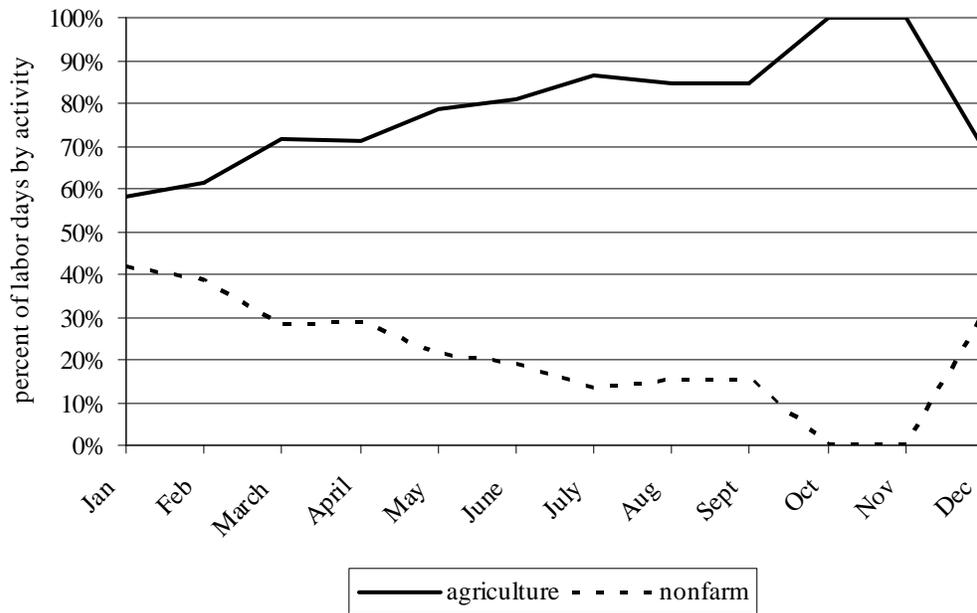
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Figure 1. Seasonality of rural non-farm employment, Ethiopia 1993



Source: Habtu (1997)

Table 1. Non-farm share of rural income

Region	Nonfarm share of rural income		
	total nonfarm earnings	local nonfarm business and employment	transfers and remittances
Africa	34%	28%	6%
Asia	51%	40%	11%
Latin America	47%	41%	6%

Source: Reardon et al. (2007).

Table 2. Returns to labor in rural non-farm activities, Darfur Sudan 1993

Nonfarm activity	Income per day (Sudanese pounds)	Sector
tabag making	10	manufacturing
carpet making	21	manufacturing
pot making	23	manufacturing
tea selling	60	commerce
water peddling	75	commerce
food selling	80	commerce
shoe making	150	manufacturing
blacksmithing	150	services
construction	180	services

Source: Haggblade, Hazell and Reardon (2007).

Table 3. Mixed equity impact of rural non-farm income

Quintile	Rural Nonfarm Income as Share of Total Income					
	Equity enhancing		Neutral		Inequitable	
	Egypt, 1997	Pakistan 1989	India 1999	Ethiopia 1990	Ecuador 1995	Viet Nam 1997
poorest	59%	75%	32%	32%	22%	40%
2nd	52%	63%	39%	-	37%	42%
3rd	51%	36%	38%	30%	37%	50%
4th	53%	33%	39%	-	46%	60%
highest	38%	21%	31%	31%	64%	82%

Sources: Lajouw (2007).

Table 4. Locational Distribution of Agriculturally Induced Nonfarm Income Growth

	Change in agricultural income	Resulting nonfarm income gains	Nonfarm income increments per \$ of farm income gain		
			rural	towns	total
North Arcot, India 1982 (millions of rupees)					
rural	408	111	0.27		
urban villages	13	18			
regional towns	8	200			
total	428	329	0.26	0.51	0.77
Kutus Region, Kenya 1987 (millions of shillings)					
rural	61	17	0.28		
regional town	3	8			
total	64	25	0.26	0.13	0.40
Michoacan Region, Mexico 1984 (thousands of pesos)					
rural	129	43	0.33		
regional town	90	5			
total	219	48	0.19	0.02	0.22

Source: Haggblade, Hazell and Dorosh (2007).