

Welcome to the 2015 ECAMA research symposium!

Welcome to the Second Annual Economics Association of Malawi (ECAMA) Research Symposium taking place in Lilongwe, the Capital City of Malawi. Malawi is truly a blessed nation endowed with many natural resources, plenty of water and expansive arable land that makes a mockery of its people each time there is hunger.

Malawi is largely an agro-based economy with the agriculture sector employing up to 84.5% of the labor force while contributing over 35.5% to the country's GDP and providing 82.5% of the country's foreign exchange earnings. As the country is getting to the end of its second medium term development plan (MGDS II), ECAMA believes it is time that we get back to the drawing board and re-strategize, learning from the past whilst forecasting into the future.

As the government and all key stakeholders are pondering on ways to diversify the economy, we all must appreciate that in the short to medium term, agriculture will remain the major driver of our economy, hence the need for proper visioning. We need to focus on transforming the agriculture sector so that it truly becomes commercially viable and contributes to the nation's wealth-creation drive.

It is with this in mind that this year's research symposium has been tailored toward collecting well-researched and evidence-backed ideas that will contribute to improving this sector for maximum returns. The theme for this year's research symposium is "**Agricultural transformation and value chain development for sustainable economic development**". We believe the deliberations from the symposium will contribute greatly to ongoing policy dialogue and debates and will inform public policy making processes including the development of the National Agriculture Policy (NAP), which is currently under development.

A big round of applause to all researchers who contributed their research papers for consideration. It was not possible to include all the brilliant papers for presentation at this forum, but we are grateful to all those who submitted their papers. For those whose papers will be presented this year, please know that we remain eager to get your views and knowledge through your presentations and the deliberations that will follow.

ECAMA is grateful to the financial and technical partnership received from the respective country offices of the International Food Policy Research Institute (IFPRI), Innovations for Poverty Action (IPA) and the European Union Delegation through the Technical Cooperation Facility III, without whose partnership it would have not been possible to hold this very important research symposium. We look forward to a continued partnership in the subsequent research symposiums.

I wish you all the best as you make your presentations and fruitful deliberations.



HENRY KACHAJE

ECAMA PRESIDENT

Second ECAMA Research Symposium Program

Thursday 4 June 2015

8:00-8:30	Registration			
8:30-10:00	Opening Plenary (Chair: Henry Kachaje)			
	Henry Kachaje	Welcome remarks & introductions		
	Hon. Felix Jumbe, MP	Opening speech - guest of honor		
	Ephraim Chirwa	Keynote address: Smallholder Agricultural Development in Malawi in the Past 50 Years: Has Public Policy Resulted in Unsuccessful Transformations?		
	Group photo			
10:00-10:30	Tea			
10:30-12:00	Parallel Session 1 (abstracts on pg. 11-16)			
	Contracts and out-grower schemes	Malawi's Farm Input Subsidy Program	Poverty and consumer choice	Trade
	Chair: Horace Phiri	Chair: Grace Tima Munthali	Chair: Rex Chapota	Chair: Thomas Munthali
	Contract Farming and Gender Equity in the Central Region of Malawi (Martin Prowse)	Cost-benefit analysis of policy reform options: an application to the Farm Input Subsidy Program and maize value chain in Malawi. (Lucia Battaglia)	The consumption, income and wealth of the poorest: Cross-sectional facts of rural and urban sub-Saharan Africa for macroeconomists. (Leandro De Magalhaes)	The impacts of biophysical factors and public agricultural water investments on net agricultural exports in Southern Africa (Greenwell Matchaya)
	Smallholder sugarcane production in Malawi: an economic analysis of outgrower participation in the sugar sector (Stephen Atkins)	Last but not least: The impact of the Farm Input Subsidy Program on the livestock sector in rural areas of Malawi. (Alessandro Romeo)	Results of a Choice Experiment and an analysis of the willingness to pay of farmers for improved cookstoves in Malawi and Mozambique (Stefan Meyer)	Maize Marketing Policies and Export Bans in Malawi: Implications for Food Security (Brent Edelman)
	Analysis of the tobacco contractual arrangement and its impact on smallholder farmers: evidence from Alliance One burley tobacco contract farming (Abel Shaba)	Does the Farm Input Subsidy Program Displace Commercial Fertilizer Sales? Empirical Evidence from Agro-dealers in Malawi (Stevier Kaiyatsa)	Poverty in Malawi: Contextual Effects, Distribution, and Policy Simulations (Richard Mussa)	International Trade and Income in Malawi: A Co-integration and Causality Approach (Greenwell Matchaya)
12:00-13:30	Lunch			

13:30-15:00	Parallel Session 2: (abstracts on pg. 12-23)			
	Technology adoption and agricultural productivity	Smallholder poverty and vulnerability	Food consumption, diets and nutrition	Trade
	Chair: Dumisani Moyo	Chair: Richard Mussa	Chair: Rodney Lunduka	Chair: Blessings Chinsinga
	The determinants of intensification of rice and potato farmers in Uganda (Lydia Nazziwa)	Determinants of household resilience to dry spells and drought in Malawi: A case of Salima District (Taonga Banda)	Poverty, food prices, and dietary choices in Malawi (Karl Pauw)	Assessing the policy environment for cash crops in Malawi. What could hinder the achievement of the National Export Strategy objectives? (Valentina Pernechele)
Assessing farmer household's willingness to pay for improved common bean varieties in Malawi (Grace Timanyechi Munthali)	Impact of small-scale irrigation on poverty in Malawi (Zephania Bondera Nyirenda)	Impact of food security intervention and nutrition education on child dietary diversity in Malawi: results from a randomized controlled trial (Alexander Kalimbira)	Trade in Maize, Groundnut and Soybean: The Case of Malawi 1999 - 2013 (Jones Govereh)	
Land Misallocation and Productivity (Raul Santaaulalia-Llopis)	Subsidies and vulnerability: The paradox in the Malawi FISP (Betty Chinyamunyamu)	To sell or consume? Exploring gendered household decision-making on cash crop production, consumption and sales (Noora-Lisa Aberman)	Analysis of Malawi's International Cotton Trade (Elizabeth Kabaghe)	
15:00-15:30	Tea			
15:30-17:30	IPA/IFPRI Plenary (Chair: Karl Pauw)			
	Agricultural transformation in Africa: policy and lessons from value chain analyses (abstracts on pg. 9-10)			
	Paul Dorosh	Cereal Price Stabilization in Ethiopia: Implications of International Experience		
	Bart Minten	Transforming staple food value chains in Africa: The case of Ethiopia		
	Sarah de Tournemire/ James Mwera	Agricultural Transformation and value chain development: Lessons from Randomized Control Trials (RCTs) conducted in Africa		
Susan Godlonton	Poverty reduction for small holder farmers, Brazilian-style: can it work in Africa?			
17:30-19:00	Cocktail Function Sponsored by IFPRI			

Friday 5 June 2015

8:30-10:00	Parallel Session 3 (<i>abstracts on pg. 23-28</i>)			
	Contracts and out-grower schemes	Farmer access to markets and information	Food security	Trade and Industry
	Chair: Betty Chinyamunyamu	Chair: Elizabeth Kabaghe	Chair: Flora Nankhuni	Chair: Abel Shaba
	How Traceability is restructuring Malawi's Tobacco industry (<i>Martin Prowse</i>)	Does access to markets improve livelihood of rural households? Case study of smallholder farmers in rural Malawi (<i>Rodney Lunduka</i>)	Identifying geospatial zones to guide agricultural development planning in Malawi (<i>Athur Mabiso</i>)	The Political Economy of Industrial Policy in Malawi: Some Preliminary Theoretical and Practical Reflections (<i>Blessings Chinsinga</i>)
	Linking farmers to markets through contracts (<i>Felix B. Lombe</i>)	Role of interactive radio programming enhanced by mobile platforms for effective inter and intra communication across agricultural value chains. (<i>Rex Chapoto</i>)	Perceptions of prisoners on the food security situation in Malawi prisons (<i>Hastings Moloko</i>)	Leadership for Structural Transformation and Development (<i>Blessings Chinsinga</i>)
	Smallholder rice farmers in Malawi can be profitably included (<i>Rollins Chitika</i>)	Food Demand and Aflatoxin Consumption in Malawian: A Bayesian Approach (<i>Henry Kankwamba</i>)	Agricultural Output Aggregation at a Crossroads? Insights from the Interface of Mathematics, Agricultural Modernization and Indigenous Knowledge, 1961-2005 (<i>Dumisani Moyo</i>)	Trade impacts of the Cotonou agreement on Malawi exports? What lessons for economic partnership agreements negotiations? (<i>Horace Phiri</i>)
10:00-10:30	Tea			
10:30-12:00	Closing Plenary: Panel discussion on agricultural transformation and value chain development in Malawi (Chair/moderator: Chawezi Banda, Producer MBC TV)			
	Panelists: Tamani Nkhono, CISANET Candida Nankhumwa, FUM Grace Mhango, GTPA Government of Malawi Representative			
12:00-13:30	Lunch and end of program			

Plenary speakers

Bart Minten (International Food Policy Research Institute) a Belgian citizen, joined IFPRI as a senior research fellow in December 2006. He is based in Addis Ababa and is the program leader of the Ethiopia Strategy Support Program. His research focuses mostly on generating evidence and impacts of agricultural and food system transformation in Africa and Asia. Prior to joining IFPRI, he was a senior research associate for the Cornell Food and Nutrition Policy Program in Madagascar. He also has held the position of assistant professor at the Department of Agricultural and Environmental Economics, KU Leuven, as well as teaching positions at Cornell University and the University of Antananarivo, Madagascar. Bart received his Ph.D. in Agricultural and Resource Economics from Cornell University.

Candida Nankhumwa (Farmers Union of Malawi) holds a PhD in Agriculture Economics from University of Greenwich in London. She received her MSc in Agriculture Economics and BSc in Rural Development from the University of Malawi and is working as Director of Research, Policy and Partnerships at Farmers Union of Malawi (FUM) since July, 2014. Candida leads her organization in engaging with the government of Malawi to ensure formulation of agriculture and trade policies that will promote structural transformation delivering inclusive growth and support a policy environment that is conducive to agricultural diversification and commercialization. Prior to this she worked as Director of Agribusiness and Marketing, at FUM; Monitoring, Evaluation and Communications Manager for NASFAM.

Ephraim Chirwa (Chancellor College, University of Malawi) is Professor of Economics at Chancellor College, University of Malawi and Managing Director at Wadonda Consult Ltd. He graduated from the University of Malawi in 1989. He holds an MPhil in Economics awarded by the University of Cambridge in 1991. In 1993, he joined the Department of Economics at Chancellor College, University of Malawi as lecturer in economics. He completed his PhD in Economics at the University of East Anglia in 2000. Over the last 20 years he has undertaken research on various aspects of the Malawian economy, particularly on agricultural reforms, farming systems, and smallholder farmer organizations. He has collaborated with Andrew Dorward on a number of research projects including the ongoing evaluations of the Farm Input Subsidy Programme in Malawi since 2006.

Felix Jumbe (Member of Parliament) graduated from the University of Malawi in 1990 with a Bachelor of Commerce (Business Administration). He also holds a postgraduate diploma in Marketing from the Chartered Institute of Marketing UK obtained in 1993 and qualified as a member of the same in 1994. Currently he is studying for PhD in Entrepreneurship with Pentecost Life University. Felix is a farmer and has been managing director of Peacock Enterprises Ltd, a vertically integrated farming business involved in certified seed production and marketing under the Peacock Seeds brand, breeding dairy cattle, retail trading as Peacock Superettes in Lilongwe and transport. Currently he serves as a Member of Parliament for Salima Central and he is the campaign director for Malawi Congress Party. He also serves as the Chairperson for the Parliamentary Committee on Agriculture, Irrigation and Water Development and he is a Shadow Minister for the same. He also serves and has served in the past as a board member for various organizations including the Alliance for Commodity Trade in Eastern and Southern Africa (ACTESA); the Farmers Union of Malawi, the Southern Africa Confederation of Agriculture Union (SACAU) amongst others.

Grace Mijiga Mhango (Grain Traders Association of Malawi) is a goal oriented energetic self-driven and decisive agribusiness executive with 25 years' experience. She has multi-sectoral experience spanning from secretarial services, creative industry, insurance services, agribusiness (farming, commodity trading and agro- processing), distributorship and program designing. An effective

negotiator as attested by resolution of conflicts between government and grain traders and farmers. She has also negotiated with different donors on various projects, as well as negotiated with private sector including the banking sector for implementation of unique Trade financing products. Grace is a social entrepreneur and an agent of change for the society. Her passion is to make a positive impact in the agriculture sector of Malawi and in Sub-Sahara Africa in order to contribute to the positive growth of the economy at large. Academically, she has a Diploma in Secretarial Studies and an Advanced Certificate in Book-Keeping and Accounting. Grace has obtained training in IT by Ronald Brown Institute, Quality and Standards by USAID Compete Kenya, Marketing Strategy by Making Markets Matter USA, Leadership skills by USAID Africa Lead Champion of change Kenyan International Leadership Program (IVLP) USA and Social Entrepreneurship and Innovative skills by Miami University.

Henry Kachaje (Economics Association of Malawi) is the president of the Economics Association of Malawi (ECAMA) and Managing Director of Business Consult Africa Ltd, a professional consulting and business development service provider he helped establish in 2000 with technical expertise from Traidcraft PLC, UK's leading Fair Trade organization. He is an economist (University of Malawi) and a certified business consultant (University of Durham). He has consulted on various economic and enterprise development assignments in Scotland, South Africa, Zambia, Mozambique, Tanzania, Botswana and Malawi. His professional expertise include leadership development, organizational and enterprise development, export trade facilitation, change management, strategy development, team building, entrepreneurship training, personal development coaching and motivational speaking.

James Mwera (Innovations for Poverty Action) was born, raised, and educated in Malawi, James joined the world of social research in 1996. Since that time, he has been involved in over eighty research and development-related projects with several local and international organizations, including the University of Malawi's Center for Social Research, Center for Educational Research and Training, Malawi College of Medicine, the National Statistical Office, the University of Pennsylvania, Wadonda Consult, the World Bank and the Innovations for Poverty Action (IPA). Currently, he is a Research Coordinator for IPA Malawi. James is also a founding member of the Invest in Knowledge Initiative (IKI), a research services nonprofit operating in Malawi and the USA.

Paul A. Dorosh (International Food Policy Research Institute) has been the Division Director of IFPRI's Development Strategy and Governance Division since April, 2011. His previous positions include IFPRI Senior Research Fellow and Program Leader of the Ethiopia Strategy Support Program in Addis Ababa (2008-2010), Senior Economist at the World Bank (2003-2008), senior research fellow with IFPRI in Dhaka, Bangladesh (1997-2001) and Associate Professor at Cornell University (1994-97). He holds a Ph.D. in Applied Economics from the Food Research Institute, Stanford University and a B.A. in Applied Mathematics from Harvard University, and has published research on agricultural markets, food policy, international trade, economy-wide modeling and the rural-urban transformation.

Susan Godlonton (Williams College) is an Assistant Professor in the Department of Economics at Williams College and a fellow at the International Food Policy Research Institute in the Markets, Trade and Institutions Division. She is an applied development economist focusing on health, labor markets and most recently agriculture in Sub-Saharan Africa. Her current work examines inventory credit as a means to mitigate risk in rural Burkina Faso, and different models of agricultural extension support to improve the livelihoods of small holder farmers in Senegal and Malawi. Dr. Godlonton received her PhD in Economics and Public Policy from the University of Michigan and her Masters in Economics from the University of Cape Town. She has published in both economics and medical journals including

the Review of Economic Statistics, American Economics Journal: Applied Microeconomics, Journal of Development Economics and Aids and Behavior.

Sarah de Tournemire (Innovations for Poverty Action) is responsible for developing and overseeing the organization's communications and fundraising strategies to raise IPA's profile and financial resources. Sarah has previously worked as a staff member, consultant and volunteer for nonprofit organizations in the US and internationally for over 15 years, with an emphasis on development, management and strategic planning for the nonprofit sector. She has extensive experience as a consultant working with diverse organizations such as the International AIDS Vaccine Initiative, The Armory Foundation, Blue Man Group (Blue School), and the International Center. Sarah has also held senior positions at Concern Worldwide US, the Drugs for Neglected Diseases Initiative, U.S. Fund for UNICEF, and New York University. Sarah earned her bachelor's degree in international affairs from The American University of Paris and a master's in public administration from New York University; she is also a Certified Fundraising Executive.

Tamani Nkhono-Mvula, (Civil Society Agriculture Network) is currently the National Director of the Civil Society Agriculture Network in Malawi and has 15 years of experience working in the sectors of agriculture, rural development and agricultural policy. He holds a BSc in Agricultural Economics and a Diploma in Rural Development from the University of Malawi. He also holds an MA in Development Studies from the Institute of Development of Studies, University of Sussex. His current areas of interests are in the political economy of agriculture policy, science and technology for agriculture development.

Abstracts for IPA/IFPRI Plenary: Day 1, June 4th 15:30 – 17:00
Agricultural Transformation in Africa: Policy and Lessons from value chain analysis

Cereal Price Stabilization in Ethiopia: Implications of International Experience

Paul A. Dorosh, International Food Policy Research Institute, Washington D.C. (presenter)

Bart Minten, International Food Policy Research Institute, Washington D.C.

David Stifel, Lafayette College

Abstract: Increases in cereal prices in Ethiopia have raised concerns about adverse effects for poor net consumers. Moreover, domestic prices of some cereals (especially maize) have fluctuated widely with wholesale prices at harvest times dropping dramatically in some years, to the detriment of producers. Price stabilization efforts are therefore an important consideration for Ethiopian policy makers. This paper is designed to shed light on options for cereal price stabilization in Ethiopia drawing on experiences of other developing countries.

Transforming Staple Food Value Chains in Africa: The Case of Teff in Ethiopia

Bart Minten, International Food Policy Research Institute, Addis Ababa, Ethiopia.

Abstract: We study changes in the last decade in the teff value chain, Ethiopia's most important staple food crop by area and value. Upstream, there is increasing adoption of modern inputs and new varieties - especially by those farmers living close to cities - leading to higher land productivity. Mid- and downstream, we find increasing willingness-to-pay for convenience and quality, as illustrated by the emergence of one-stop retail shops and the rise of more expensive teff varieties. Because of the large numbers of teff producers and consumers, this transformation has important implications on the country's food security.

Fighting Poverty with What Works - The IPA Mission Across the Globe

Sarah de Tournemire, Innovations for Poverty Actions (presenter)

Carly Farver, Innovations for Poverty Actions

Abstract: IPA is part of a movement that is revolutionizing how global poverty is addressed. We envision a world in which policymakers and implementing partners seek and use rigorous evidence to guide their decisions, ensuring that measurable impact is the ultimate yardstick for crafting development policies and programs. Our work and research is helping to find the most cost effective ways to solve problems in education, health, agriculture, productivity, and finance.

Our comparative advantage is in using Randomized Control Trials (RCT.) which is the same methodology used in high quality medical research. It relies on the random assignment of a program or policy to measure its impact on those who participated in a program and those who did not. RCTs provide the most credible and reliable way to assess the true impact of an intervention. If we want to know how effective a program is, we need to have a comparison group. Without a comparison, we can't really say anything about what would have happened without the program. And the best way to create a fair comparison group is with random assignment. With random assignment, each person in the study has the same chance of being assigned to a group as another person. This ensures that as long as the two groups are large enough, they will on average be statistically identical. Any change which we then observe between the two groups can be attributed entirely to the program or intervention itself, rather than other external or unobserved factors. This session will highlight how this most effective impact evaluation method works. Our evidence can show you what works so that you can better allocate your support to programs, interventions, and organizations that are especially effective. This session will highlight IPA's mission globally in its conducting randomized control trials to inform evidence based planning.

Agricultural transformation and value chain development: Lessons from Randomized Control Trials (RCTs) conducted in Africa

Thomas Munthali, Innovations for Poverty Action, Lilongwe, Malawi

James Mwera, Innovation for Poverty Action, Lilongwe, Malawi

Abstract: This session will highlight findings from various randomized control studies conducted by IPA and its partners in the area of Agricultural transformation and value chain development. The session will share on the opportunities, challenges and recommendations of how countries like Malawi can unlock such potential in this area as part of their long term national and household level socio-economic wellbeing. African and related developing countries will be the focus. The analysis shows fertilizer and pesticide/herbicide use is higher for farmers accessing extension and training services targeting rice and potato production. Farmers who cultivate smaller plots of land, had access to labor, access to credit and whose farms were nearer to input suppliers are more likely to intensify. Results also indicated that education and age of household head, market participation, topography and land tenancy all have an influence on adoption of agricultural intensification technologies. The study shows that farmer knowledge regarding improved agricultural practices and management plays a big role in influencing crop productivity and adoption of agricultural intensification.

Poverty reduction for small holder farmers, Brazilian-style: Can it work in Africa?

Kate Ambler, International Food Policy Research Institute, Washington D.C.

Alan de Brauw, International Food Policy Research Institute, Washington D.C.

Susan Godlonton, International Food Policy Research Institute and Williams College

Abstract: This paper presents preliminary pilot results from an ongoing project modelled after Brazil's Fomento. The evaluation focuses on the efficacy of developing a farming business plan and individualized extension services among approximately 1,200 farmers in 120 distinct farming clubs in Dowa and Ntchisi districts. The farmers in our study also have the opportunity to participate in a broader NASFAM program, a seed replicability program, allowing us the opportunity to not only examine how the Fomento-inspired program affects agricultural yields and overall household wellbeing, but also how it may improve participation in other agricultural production enhancing initiatives. By offering farmers the opportunity to carefully plan ahead for the agricultural season in consultation with an extension agent, a unique service is being offered, providing assistance with both agricultural practices and technologies and general farm management. In addition, we test two versions of transfers framed for agricultural inputs to determine the most appropriate modality in this setting: cash transfer to farmers and transfers of in-kind inputs. Our experiment is designed to enable us to measure the complementarity between the planning and transfer interventions, so that we can determine whether future programs should focus resources on one of these strategies exclusively or bundle the two together.

Abstracts of Contributed Papers: Parallel Session 1
Day 1, June 4th 10:30 – 12:00

Parallel session 1.1: Contracts and Out-grower Schemes

Contract farming and gender equity in the central region of Malawi

Martin Prowse, Lund University, Sweden

Betty Chinyamunyamu, National Smallholder Farmers Association of Malawi

Jytte Agergaard, Copenhagen University, Denmark

Ronald Ngwira, Alliance One, Malawi

Abstract: Contract farming is expanding rapidly in Africa but frequently suffers from high default rates and claims of exploitation from farmers. This paper evaluates whether including wives in contract farming operations improves the benefits farms, firms and families accrue from the relationship. It evaluates whether including wives within established schemes: (i) reduces default rates by increasing social collateral in the contract; (ii) improves collaboration in households leading to better yields; and (iii) improves the intra-household distribution of labor for wives and children. The paper reports early findings from a study where qualitative methods were integrated within a clustered experimental design.

Smallholder sugarcane production in Malawi: An analysis of out grower participation in the country's sugar industry

Stephen L Atkins, EU-NAO Support Unit, Malawi

Abstract: This paper details the structure and the current dynamics of the emerging sugarcane out growers sub-sector of Malawi's sugar industry. It was initiated by the country's sugarcane out growers to assist the newly formed Sugarcane Growers Association of Malawi (SUGAM) focus on the needs and aspirations of its members to help develop the industry in an effective and efficient manner. The study examined the evolution and current structure of the out grower (smallholder) sugarcane sector. It then looked at development and production costs and returns for four out grower sugarcane productions systems, namely: center pivot production at Dwangwa in the central lakeshore area and Nchalo in the Lower Shire Valley, along with furrow irrigated and rain fed sugarcane production, again at Dwangwa. It was demonstrated that out grower sugarcane farming can be profitable and help uplift rural households out of poverty. However, for those farmers cultivating the crop on rain fed fields the profitability is limited by poor access to highly fragmented land parcels, labor and capital as well as low management skills. The profitability of irrigated sugarcane production substantially exceeded that of the rain fed crop through farming on contiguous parcels of land, and through economies of scale of operations and management, with much higher yields being attained through irrigation. The paper argues that if the country is to increase the opportunities for smallholder sugarcane production, milling capacity will have to increase. This will require considerable sums of private capital and to attract this into the industry, certain key aspects of the industry relating to the structure and the support to the out grower groups will need to change. Firstly, for those farmers cultivating sugarcane under rain fed conditions, they will need to grow the crop on larger, contiguous blocks to enjoy the benefits of economies of scale and for improving the cost effectiveness of the sugar value chain. This will be difficult to arrange but there are good, successful participatory approaches that, if well employed, can assist in this regard. The development of technical and managerial skills are highly important prerequisites for successful sugarcane production, as is the need for industry stakeholders to work in disciplined partnership. The industry should continue the soon to close EU funded

sugarcane out grower capacity building program. SUGAM could help the industry in the above and act as an instrumental voice for growers when dealing with millers, and for millers to ensure best practices are employed at farm level. SUGAM should also maintain a register of growers' production information as currently the catalogue of important and necessary data is very poorly maintained. This, along with many other action points makes the development of SUGAM as an apex body vital to the transparent and sustainable growth of the outgrower sugarcane sub-sector.

Analysis of the tobacco contractual arrangement and its impact on smallholder farmers: evidence from Alliance One burley tobacco contract farming

Abel Shaba, Lilongwe University of Agriculture and Natural Resources

Abstract: The study was done with aim of understanding the contractual relations between buyers and small-scale growers in the tobacco industry. Cross section data collected from 211 contract and 109 non-contract burley tobacco farmers that sold tobacco in 2012/13 season. The study had three specific objectives. Firstly, the study analyzed the contractual arrangement and performance factors using the New Institutional Economics theory of Transaction Costs Economics. Side-selling, moral hazard, and strategic contract default by farmers were some of the transactions costs as key factors that affect the success of the contract farming. At the same time, contract farming contributes to reduced monitoring costs for the company as farmers work in groups and monitor each other's activities such as bailing of tobacco which ensures that nobody puts NTRM in the bales. . Secondly, for the impact evaluation, a Heckman Selection model was used. The study analyzed the factors that affect farmers to participate in contract farming and the effect of the participation income. Land holding size and number of days to transport tobacco strongly affected participation decision. Finally, the land holding size affected level of income that a farmer realized from tobacco production. Both, the average price and income for contract farmers were higher than for non-contract farmers. Contract farming has positive impact on smallholder farmer's income. This put together gives a strong indication to link more smallholder farmers to tobacco companies.

Parallel session 1.2: Malawi's Farm Input Subsidy Program

Cost-benefit Analysis of Policy Reform Options: An Application to the Farm Input Subsidy Program and Maize Value Chain in Malawi

Lucia Battaglia, Food and Agricultural Organization (FAO)

Valentina Pernechele, Food and Agricultural Organization (FAO)

Abstract: This paper presents the results of an ex-ante analysis of the impact of selected policy options, which are currently debated in Malawi, to improve the effectiveness of the Farm Input Subsidy Program (FISP) on the maize value chain. This study, based primarily on data from the 2009/2010 *Living Standards Measurement Study* of the World Bank, assesses the effects of two FISP reform options: (i) a retargeting of the beneficiaries towards more productive farmers (in terms of yields) and (ii) an increase of farmers' contribution in the purchase of seeds and fertilizers, corresponding to a subsidy decrease from 90 percent to 50 percent. Using the FAO-VCA tool for analysis, the methodology used is based on a cost-benefit approach that assesses the impacts of these selected policies on the maize value chain. A preliminary interpretation of the baseline data confirms that, although the input subsidies represent a cost for the society, they have a positive effect on rural household income. In addition, maize farmers supported by FISP enjoy a high degree of protection from both the input and output side of the value chain. The analysis suggests that both policy options would lead to an increase in national maize production, and in the profitability and competitiveness of the maize value chain. However, these policy changes are likely to increase the income gap between the poorest and the farmers enjoying higher level of productivity. This implies that any retargeting or

subsidy reduction should be accompanied by social policies that off-set the negative impacts on the poorest, and that the new implementation modalities should be closely monitored. These preliminary findings will be further explored in order to provide a more in-depth and detailed picture of the ex-ante impacts of the reformulation of the FISP on the maize value chain.

Last But Not Least: The Impact of the Farm Input Subsidy Program on the Livestock Sector in Rural Areas of Malawi

Alessandro Romeo, Food and Agricultural Organization (FAO)

Janice Meerman, Food and Agricultural Organization (FAO)

Mulat Demeke, Food and Agricultural Organization (FAO)

Abstract: In this paper, we analyze the impact of the Farm Input and Subsidy Program (FISP) on the livestock sector in rural areas of Malawi. We hypothesize three major ways that FISP might impact livestock production. First, increased crop production means increased crop residues that can be used to feed livestock, in particular, small livestock such as sheep, goats and poultry. Second, increased income from crop sales could be invested in livestock acquisition. Small livestock are not only a source of more nutritious foods, but they are also less input intensive productive assets that could be particularly appealing for small farmers. Finally, if households are more food secure due to increased production and income, they will be more resilient to shocks, not having to resort to the sale of livestock as a coping mechanism. In order to consistently estimate FISP impacts on the livestock sector, we used propensity score matching methods, and tested for hidden bias to control for unobserved heterogeneity in the data. To carry out the analysis, we made use of a recent representative household survey collected between 2010 and 2011 by the National Statistics Office comprising more than 12 000 households. Overall, we found that participation in the FISP significantly increased ownership of small livestock such as goats, sheep and poultry. In addition, FISP participants are also significantly more likely to produce livestock products for home consumption. However, these are preliminary findings and we intend to use panel data, complemented with an instrumental variable approach to further strengthen our results.

Does the farm input subsidy program displace commercial fertilizer sales? Empirical evidence from agro-dealers in Malawi

Stevier Kaiyatsa, Lilongwe University of Agriculture and Natural Resources

Charles Jumbe, Centre for Agricultural Research and Development (CARD)

Julius Mangisoni, Lilongwe University of Agriculture and Natural Resources

Abdi Edriss, Lilongwe University of Agriculture and Natural Resources

Jacob Ricker-Gilbert, Purdue University

Abstract: Using cross-sectional retail level data collected in twenty districts of Malawi in 2014, the study applied a lognormal hurdle model to identify factors that influence independent agro-dealers' participation in the fertilizer market and its effect on the volume of commercial fertilizer sales in Malawi. The study further applied an Autoregressive Distributed Lag (ARDL) model to estimate long and short run relationships among commercial fertilizer sales, subsidy fertilizer sales and commercial fertilizer price over time using quarterly time series data from 1998 to 2011. The study found that initial start-up capital increased the likelihood of the independent agro-dealer's participation in the fertilizer market. Conditional upon participation, distance between independent agro-dealer's store and ADMARC/SFFRFM depot, having more than one selling points, number of other agro-dealers at the market center, store ownership, store size, the number of full time employees, number of farming families at EPA level, population density per district, and spatial differences positively influenced the volume of commercial fertilizer sales. Ordinary Least Square regression of factors influencing commercial fertilizer sales revealed that the volume of subsidized fertilizer sold at the EPA level significantly promoted the volume of commercial fertilizer sales by about 0.84 percent for fertilizer

distributor retail outlets. The ARDL model estimates showed that the subsidized fertilizer sold over time displaced the volume of commercial fertilizer sales by about 0.03 percent in the long run and 0.04 percent in the short run. The deviation from the long-term equilibrium in commercial fertilizer market was adjusted by 51 percent over each year. The study recommends that independent agro-dealers should be supported with start-up capital to promote their participation in the fertilizer market, be encouraged to penetrate rural remote market centers that are less served by ADMARC/SFFRFM, and open more selling points selling fertilizer in different locations as a strategy to increase market share. It further recommends the Government to deliberately reduce ADMARC/SFFRFM presence in markets that have adequate private sector coverage so that they can concentrate on providing better services to the more remote areas that are not easily served by the private sector.

Parallel session 1.3: Poverty and Consumer Choice

The Consumption, Income and Wealth of the Poorest: Cross-Sectional Facts of Rural and Urban Sub-Saharan Africa for Macroeconomists

Leandro de Magalhaes, University of Bristol

Raul Santaaulalia-Llopis, Washington University St. Louis

Abstract: This paper provides new empirical insights on the joint inequality of consumption, income and wealth in three of the poorest countries in the world: Malawi, Tanzania, and Uganda. Our first finding is that while income inequality in SSA is similar to that of the US, wealth is much less dispersed than in the US by one-third. Similarly, while the top of the income distribution earns a similar share of total income in SSA than in the US, the share of total wealth accumulated by the income rich in SSA is one-fifth of its US counterpart. This dwarfed transmission from income to wealth suggests that SSA households face a larger inability to save and accumulate wealth compared with the US. This result is, at the same time, accompanied by a lower transmission from income to consumption inequality that suggests the presence of powerful institutions that favor consumption insurance in detriment of savings. These features are more relevant for rural areas that represent roughly four-fifths of the total population. We provide extensive evidence of this phenomenon and identify the few successful pockets of the population that are able to accumulate wealth by exploring sources of inequality such as age, education, migration, ability to borrow, and societal systems.

Results of a Choice Experiment and an analysis of the willingness to pay of farmers for improved cookstoves in Malawi and Mozambique

Stefan Meyer, International Food Policy Research Institute, Lilongwe, Malawi

Edward Kato, International Food Policy Research Institute, Washington D.C.

Ephraim Nkonya, International Food Policy Research Institute, Washington D.C.

Vincent H. Smith, International Food Policy Research Institute, Washington D.C.

Abstract: Solid biomass is the main energy source for cooking in many developing countries. Beyond that consumption rates of firewood and charcoal are high, because most households use inefficient devices for cooking. Stresses on the ecosystem caused by consumption of biomass could be mitigated by a comprehensive adoption of improved cookstoves. Development partners and NGOs disseminate improved cookstoves in sub-Saharan Africa since more than 20 years. However, their adoption rate in rural areas is still low. Market information can be used to develop comprehensive adoption strategies for improved cookstoves. As there are no or only disturbed markets for improved cookstoves in rural areas, we investigate the demand side of a market by conducting stated preference approaches in Dedza District, Malawi and Angonia, Mozambique. We conduct both a choice experiment and an analysis of the willingness to pay for the locally produced Chitetezo Mbaula and a factory-made and

imported metal stove. Our results show, that networks in rural areas are very important for the adoption of improved cookstoves. Especially, the membership in women's groups has a positive impact on the preference. Respiratory diseases and scarcity of firewood also contribute to a positive perception towards improved cooking devices. Additionally, we find evidence for the mental accounting hypothesis for remittances. Income received from relatives or friends is more likely to be spend on purchasing improved cookstoves.

Poverty in Malawi: Contextual Effects, Distribution, and Policy Simulations

Richard Mussa, Chancellor College, University of Malawi

Abstract: This paper addresses two issues which have hitherto been ignored in the existing studies on poverty and its correlates. Firstly, the poverty literature does not take into the fact that groups of households become differentiated, and that the group and its membership both influence and are influenced by the group membership. These contextual effects reflect the presence of externalities. Secondly, existing poverty studies ignore the fact that changes in the correlates of poverty may not only affect the average level of consumption, but may also affect the distribution of consumption. The paper develops methods for addressing these two problems. Using Malawian data from the Third Integrated Household Survey, the empirical application of the methods suggest that ignoring these contextual and distribution effects leads to mis-measurement both quantitatively and qualitatively of policy interventions on poverty. This turn implies that policy conclusions based on the existing methods might be misleading.

Parallel session 1.4: Trade

The Impacts of Biophysical Factors and Public Agricultural Water Investments on Net Agricultural Exports in Southern Africa

Greenwell Matchaya, IWMI-Southern Africa

Charles Nhemachena, IWMI-Southern Africa

Sibusiso Nhlenghwa, IWMI-Southern Africa

Abstract: This paper analyses the impacts of changes in biophysical and agro-climatic factors as well as investments in agricultural water management on agricultural trade flows in Southern Africa. Using data from various sources including FAOSTAT, University of East Anglia CRU-TS database, ReSAKSS and IFPRI, a series of analyses were conducted to understand trade flows in the SADC region. Specifically, the empirical analyses were based on trend analysis as well as econometric estimations and simulations. The econometric model was estimated using Ordinary Least Squares, a static panel data model by both random and fixed effects, assuming non-existence of any endogenous variables and an extension of the static model by allowing for the presence of endogenous variables. The other two estimations were meant to correct for inconsistencies from endogenous linear regression models if they are estimated using Ordinary Least Squares method without instrumentation. The interplay between agricultural export and import needs of a country/region is influenced by various factors such as biophysical conditions, changes in climate; institutional factors, and investment in agricultural water among other factors. Specifically, the results show that rainfall, temperature, tree covers, population, GDP, public funding on agricultural water development, and cropland are critical for determining net exports from a country. This implies that net exports can increase in the long run if investments in water management technologies increase; tree covers and the general agro-ecosystems are cared for, through deliberate policy.

International Trade and Income in Malawi: A Co-integration and Causality Approach

Greenwell Matchaya, International Water Management Institute

Sibusiso Nhlengethwa, International Water Management Institute

Pius Chilonda: Independent researcher, Lusaka

Abstract: This paper investigates causal relationships between exports, imports, and economic growth in Malawi over the period 1961-2010. These relationships are examined using the Johansen frameworks for co-integration whereas the Vector Error Correction (VECM) framework is further used to provide estimates for both short-run and long-run dynamics in the series under study. The empirical results, including the impulse responses support the export-led economic growth and export driven imports hypotheses in the long run, but they provide no evidence of any economic growth-driven exports. These results strongly support the role of international trade in Malawi's economic development and hence policies that seek to facilitate Malawi's trade within and outside the SADC regional would be worthwhile to pursue.

Abstracts of Contributed Papers: Parallel Session 2
Day 1, June 4th 13:30 – 15:00

Parallel Session 2.1: Technology adoption and agricultural productivity

Determinants of Agricultural Intensification among Rice and Potato Farmers in Uganda

Lydia Nazziwa, IITA Uganda

Abstract: Uganda's population growth rate currently stands at of 3.2% per annum, while the agricultural sector is growing at a much slower rate (1.5% in 2013/14). To feed this rapidly growing population, yields will have to increase significantly since population pressure is high, farm sizes are small (<2 ha), and the option to put new land into production is rather limited. Actual yields for nearly all crops are far below (<30%) potential, and this enormous yield gap is due to very limited use of agricultural inputs. Agricultural intensification will be needed to achieve significant yield increments. This paper explores the different socio-economic and institutional factors influencing the adoption of agricultural intensification, based on a survey of 900 potato and rice farmers in the South Western highlands and Kioga plains of Uganda respectively.

Assessing farmers' willingness-to-way for improved common bean seed varieties in Malawi: case study of Kasungu and Dedza districts

Grace Timanyechi Munthali, Department of Agricultural Research Services

Abstract: Therefore it is the interest of this study to find the reasons why productivity of the crop is still low despite the release of improved varieties and efforts to address low productivity. The study adopted contingent valuation (CV), a method frequently used to assess willingness-to-pay of people for non-market goods or services and this was applied to assess farmer's willingness-to-pay for the new improved bean seed varieties which are high yielding. Double bounded dichotomous choice with an open ended follow-up format was used to obtain the household's willingness-to-pay. In addition; the study reviewed the existing dissemination channels of bean seed to make recommendations with regard to seed supply. Descriptive statistics from 132 selected households shows that the structural constraints to seed acquisition are compounded by farmers' poverty. Otherwise, most farmers are aware of the existence of improved varieties of common bean seed and perceive that with the use of this seed, productivity can improve hence willing to pay for the good. The study is 95% confident that mean price farmers are willing to pay for improved common bean seed is between MK 527.78 and MK 591.92. Three major existing informal dissemination channels of bean seed were discovered in the study areas. Therefore there is a need for government to work in collaboration with NGOs towards ensuring a formal supply system of bean seed characterized by vertically organized production and dissemination of tested and approved seed varieties, and using strict quality control rules, so that farmers can be assured of accessing improved seed varieties. This will improve the nation's food security.

Land Misallocation and Productivity

Diego Restuccia, University of Toronto

Raul Santaaulalia-Llopis, Washington University in St. Louis

Abstract: Using detailed household-farm level data from Malawi, we measure real farm total factor productivity controlling for a wide array of factor inputs, land quality, and transitory shocks. The distribution of farm TFP has substantial dispersion but factor inputs are roughly evenly spread among farmers. The striking fact is that operated land size and capital are essentially unrelated to farm TFP implying a strong negative effect on agricultural productivity. A reallocation of factors to their efficient

use among existing farmers would increase agricultural productivity by a factor of 3.6-fold. We relate factor misallocation to severely restricted land markets as the vast majority of land is without a title and a very small portion of operated land is rented in. The gains from reallocation are 2.6 times larger for farms with no marketed land than for farms that operate marketed land.

Parallel Session 2.2: Smallholder poverty and vulnerability

Household Resilience to Dry Spells and Drought: A case of Salima District in Malawi

Taonga F. Banda, World Vision Malawi

Abstract: This study aims at identifying factors that affect resilience to prolonged dry spells and drought among smallholder farmers in Salima, one of the districts frequently affected in Malawi. The study contributes to existing literature by constructing the drought resilience index, a measure of drought resilience, and uses it to determine the effect of resilience on welfare of farming households. Appreciating that smallholder farmers are active in responding to events that threaten their livelihoods, the study identified how factors such as household assets, social capital, size of land held by the farming household, and others help farmers to absorb adverse effects resulting from prolonged dry spells and droughts. The Principal Components Analysis is used to construct the DRI. In order to capture the effect of drought on farmers' welfare, a stochastic frontier production function is estimated. Results suggest that over 62 percent of households were not resilient (and hence vulnerable) to effects of dry spells. Factors such as age of the household head, size of the farm family, land holding size, number of immediate family members living outside the household are identified to affect the resilience of farming households. The study also finds a positive correlation between resilience and improved household welfare. Policy implications call for promotion of productivity enhancing technologies and diversification from maize and from agriculture in general to reduce risks resulting from dry spells.

Impact of Small-scale Irrigation on Poverty in Malawi

Zephania Bondera Nyirenda, Lilongwe University of Agriculture and Natural Resources

Abdi-Khalil Edriss, Lilongwe University of Agriculture and Natural Resources

Lawrence Mapemba, Lilongwe University of Agriculture and Natural Resources

Boyson Moyo, Lilongwe University of Agriculture and Natural Resources

Abstract: The aftermath of the Structural Adjustment Policies (SAPs) and droughts in the 1990s which culminated into the 2002 food crisis renewed Government and donor interest to reinvest in irrigation agriculture in Malawi. As a result, there have been a number of irrigation initiatives (both Government and donor supported) to spur irrigation agriculture in Malawi between 2006 and 2014. However, there is little evidence from Malawi on the national scale on whether irrigated farming translates into poverty reduction. This study, therefore, sought to establish the impact of small-scale irrigation on poverty reduction in rural Malawi by examining poverty, crop productivity, crop income, and food security configurations of irrigation impacts. Using the Third Integrated Household Survey Data (IHS3) and Propensity Score Matching, the study found positive and significant impacts of irrigated agriculture on crop productivity, crop income and food security. However, the study found that the impact on crop productivity, crop income and food security does not profoundly translate into poverty reduction even though the poverty impact was found to be statistically significant. The study recommends encouraging farmers who have access to water to participate in irrigation agriculture. There is also need for the Government to establish large-scale irrigation schemes along the lakes and big rivers where water is abundantly available. This should be coupled with the creation of infrastructure in transport and communication to aid distribution and marketing of the crops. Such a system would make sure that all Malawians have access to safe and sufficient food all year round.

Subsidies and vulnerability - the paradox in the Malawi Farm Input Subsidy Programme

Betty Chinyamunyamu, National Smallholder Farmers Association of Malawi, Malawi

Abstract: Over the last few years, there has been a lot of research and policy interest on the role that the Malawi Farm Input Subsidy Programme (FISP) has played in addressing food insecurity in the country. The dominant view in the literature is that, in spite of some efficiency and implementation challenges, the program has been successful in increasing food production in the country. This presentation is based on research that was carried out in Mzimba, Mchinji and Mangochi districts and was aimed at analyzing how the program has affected the food security and general livelihood status of farmers from different household types. Specifically, the research considered how maize (and groundnuts) production and marketing for de jure female-headed households, de facto female-headed households and male-headed households were influenced by the program. The findings revealed that, because of increased vulnerability, female-headed households are not only likely to derive lower benefits from government interventions compared to male-headed households, they are also more likely to respond to the interventions in a manner that is counter-productive. The presentation therefore argues for increased research and understanding on the impacts of the FISP on farmers from different household types, and female-headed households in particular. Further, it highlights the need for complementary interventions within the agricultural sector.

Parallel Session 2.3: Food Consumption, Diets and Nutrition**Poverty, food prices, and dietary choices in Malawi**

Karl Pauw, International Food Policy Research Institute, Malawi

Abstract: This study reports on the links between household food consumption choices, food prices, and household income, using data from Malawi's Second and Third Integrated Household Surveys (2004/5 to 2010/11). Results indicate that while income poverty appears to have decreased on average, substantial disparities remain and are indeed increasing, with the richest quintile becoming disproportionately better off, and the poorest of the poor becoming even worse off, a trend that may well shape nutritional outcomes in the future. In addition, results find the households are generally allocating a larger share of their budgets to food, in spite of rising incomes. And while the country as a whole is consuming more of some nutrient-rich foods, such as white meat, vegetable consumption had decreased, which is likely to have negative implications for nutrition. In conclusion, there is evidence of pricing the poor out of good nutrition in Malawi.

Impact of food security intervention and nutrition education on child dietary diversity in Malawi: results from a randomized controlled trial

Alexander Kalimpira, Lilongwe University of Agriculture and Natural Resources, on behalf of the IMCF team

Abstract: Malnutrition in children under two years of age is often related to poor breastfeeding practices, inappropriate introduction to as well as low dietary quality and diversity of complementary foods, and insufficient hygiene and caring practices. Inadequate knowledge of appropriate feeding practices mainly prevents caregivers from maximizing the nutritional benefits of available foods. In 2012, a participatory nutrition education (NE) component was integrated into a food security program in Malawi. Trials of Improved Practices were conducted prior to the NE to identify culturally acceptable and affordable improved infant and young child feeding practices. The NE program called Kadyetsedwe Koyenela Ka Ana (Improved child feeding) emphasized on improving hygiene practices and the consumption of vegetables, fruits, pulses and animal source foods (ASF). The main objective of this study was to measure the impact of the NE on dietary diversity of children below two years of age. A cluster randomized controlled trial was conducted with a baseline in August 2011 (n=1041) and an endline in August 2014 (n=1223). In both surveys, children 0-23 months of age and their primary

caregivers were eligible to participate. After baseline, intervention and control areas were identified by restricted randomization based on mean height-for-age Z-scores (HAZ). Both arms received food security interventions, while NE was implemented in the intervention area only. The endline survey was conducted after two rounds of NE were completed. Child dietary diversity was calculated for children aged 6-23 months following WHO guideline. Difference-in-differences (DID) model analyses were performed to assess impact. At baseline mean age of children in the age group 6-23 months was slightly lower compared to endline (451 days \pm 161 and 469 \pm 162, respectively), and both surveys included a higher number of boys than girls (52% baseline and 53% endline). Mean child dietary diversity based on a seven food group score (CDDS) for breastfed children was 3.6 \pm 1.6 at baseline and 3.8 \pm 1.5 at endline. The DID estimated a significant positive treatment effect on mean CDDS (B= 0.4; p<0.01) including age of child, education of caregiver and wealth of the household as covariates. Increased CDDS was mainly attributed to positive treatment effects on the consumption of ASF (B= 0.13; p<0.005), specifically due to increased egg consumption (B= 0.11; p<0.001). WHO indicators minimum dietary diversity (MDD) and minimum acceptable diet (MAD) significantly improved in the intervention group (B= 0.13; p<0.01 and B= 0.12; p<0.01, respectively). Community based nutrition education on IYCF using local resources has a high potential to improve the dietary diversity of children in low income countries.

To sell or consume? Exploring gendered household decision-making on cash crop production, consumption and sales

Noora-Lisa Aberman, International Food Policy Research Institute, Malawi

Terrence Roopnaraine, Independent Consultant

Abstract: Value chains and agricultural commercialization are increasingly being promoted as mechanisms for agricultural transformation, inclusive growth, and -- more recently -- improving food security and diets. Theoretically, market-oriented production should allow farmers to increase their incomes and purchase more nutritious foods. Furthermore, crops that are both nutritious and commercially viable can overcome the inherent risks in engaging in markets because they can be consumed if market prices are not profitable. However, there is limited empirical understanding of the pathways through which such production impacts diets. Given Malawi's high stunting rates and current policy focus on commercialization of the agriculture sector, the implications of commercialization for diets and nutrition is highly relevant here. This qualitative study contributes to the empirical understanding of this issue by examining gendered household preferences and decision making dynamics related to the production, consumption, and sale of nutritious commodities. We analyses 80 individual interviews from a sample of households in 3 districts in Malawi.

Parallel Session 2.4: Trade

Assessing the Policy Environment for Cash Crops in Malawi. What Could Hinder the Achievement of the National Export Strategy Objectives?

Hélène Gourichon, Food and Agricultural Organization (FAO)

Alethia Cameron, Food and Agricultural Organization (FAO)

Valentina Pernechele, Food and Agricultural Organization (FAO)

Abstract: This paper examines the main issues affecting producers of export crops in Malawi that could challenge the attainment of the National Export Strategy 2013-2018 targets. In an effort to boost export revenues and maximize their contribution to the economic and social development of the country, the NES provides strategies for priority crops. The analysis is based on the Monitoring and Analysing Food and Agricultural Policies (MAFAP) methodology that measures price incentives for producers and other marketing agents along the value chain, and contributes to an assessment of

whether the policy and market environment are conducive to cash crops value chain development and thus the fulfilment of the NES objectives. We assess the level of policy support to the major export crops, namely: cotton, groundnuts, sugar, tea and tobacco for the period 2005-2013. This is done by calculating various indicators for producers and by analyzing public expenditure targeting the aforementioned commodities. The analysis shows that trade and market policies and overall sector performance resulted in disincentives of -15 percent, on average from 2005 to 2013, for cash crop producers. Overall, producer disincentives were mainly due to poor infrastructure, lack of competition and weak enforcement and/or inefficiency of the producer price policies. Furthermore, budget allocations to cash crops overall were quite low due to the high concentration of public expenditure in support of maize production. Finally, the MDG helps elicit the effect of market inefficiencies on farmers. This analysis offers further evidence to guide the prioritization of policies and investments in view of fully attaining the NES objectives. These include the promotion of a more competitive environment for agri-business, the facilitation of farmers' access to markets through public and private investments in post-production infrastructure and marketing services, and the development of a transparent market information system.

Trade in Maize, Groundnut and Soybean: The Case of Malawi 1999 - 2013

Jones Goverah, Private consultant

Greenwell Matchaya, International Water Management Institute, South Africa

Pius Chilonda, Independent researcher, Zambia

Abstract: This study looks at Malawi's merchandise trade of maize, soybean and groundnut products and investigates trends in trade balance, openness, product and partner diversity from 1999 to 2013. There are seven maize products, five groundnut products and four soybean products that Malawi could trade. Malawi and other SADC Member States seek to diversify and sustaining an export growth rate of at least 5% annually. This study reports on the success of this diversification and export growth strategy. The dynamic patterns of trade were measured using the compound annual growth rate. Average year-over-year growth rates illustrated how fast trade was growing over time and how that growth compared with SADC regional average. Several ratio indicators were also constructed to measure trade openness, partner and product shares. Finally trade intensity, product or market concentration indices were developed to characterize trade. Results reveal that Malawi trades in three maize products, three soybean products and two groundnut products. Over the last 14 years, Malawi's maize trade balance transitioned from trade deficit to a surplus. Malawi like its neighbors, has a deficit soybean trade balance but groundnut trade balance is in surplus. With respect to international trade, Malawi's maize and groundnut subsectors are less open with groundnut being the least open subsector. Soybean subsector flows are dominated by imports and show high levels of openness. Although growth in value of maize and groundnut exports has trailed growth in volume, Malawi has for the past 14 years failed to diversify maize and groundnut export products. Raw maize and groundnut still dominate export trade and existing shifts toward export of final consumer goods is insignificant. The long survival of trade relationships between Malawi and her neighbors reflects her land-locked geography. To support further productivity growth in maize and groundnut sectors, a more deliberate export product and market diversification strategy is necessary.

The Analysis of Malawi's Cotton Trade

Elizabeth Kabaghe, African Institute for Corporate Citizenship (AICC), Malawi

Abdi-Khalil Edriss, Lilongwe University of Agriculture and Natural Resources

Abstract: Malawi's economy largely depends on agriculture. Agricultural exports for Malawi have remained undiversified and with limited value addition; and also with Tobacco, tea and sugar as the main export commodities for Malawi. With the recent decline in the revenues from tobacco there has been a pressing need for Malawi to diversify from the traditional crops to other crops which can

generate export revenues for the country; and one such crop is cotton. The challenge for the development of cotton production has been the low and unstable farm gate prices which have affected production; the other challenge has been the reduction of domestic demand for cotton due to downsizing of the domestic cotton industry which has led to the bulk of the commodity being exported. The study thus aimed at analysing Malawi's cotton exports. The price instability index was used to examine and compare the domestic and international price instability of cotton and tobacco. The research revealed that the price instability of cotton was higher than that of tobacco on both the domestic and world market and that the instability indices of cotton on the domestic market moved in the same pattern with that on the world market. The revealed comparative advantage index was used to analyse the competitiveness of cotton exports from Malawi. It was revealed that Malawi has a comparative advantage in the exports of cotton. It was also found that the share of Malawi's cotton export on the world market was very small hence cannot influence prices. Secondary panel data on Malawi's GDP, trading partners' GDP, price of cotton, remoteness, eligibility for AGOA from 2001 to 2013 were used to run a gravity model which was used to analyse the determinants of Malawi's cotton export performance. It was found that the factors that significantly affect the exports volumes of cotton were Malawi's per capita GDP, production index and exchange rate.

Abstracts of Contributed Papers: Parallel Session 3 Day 2, June 5th 8:30 – 10:00

Parallel Session 3.1: Contracts and Out-grower Schemes

How Traceability is Restructuring Malawi's Tobacco Industry

Jason Moyer-Lee, Lund University, Sweden

Martin Prowse, Lund University, Sweden

Abstract: This paper applies a global value-chain framework to the tobacco industry in Malawi, showing how cigarette manufacturers govern the chain and control first-tier suppliers, the leaf merchants. Contract farming offers smallholders the ability to meet manufacturers' compliance and traceability requirements and an opportunity for process and product upgrading, but threatens to exclude poorer growers. The article concludes by highlighting the role leaf merchants can play in diversifying Malawi's economic base and suggests research avenues to understand this rapid institutional evolution better.

Linking Farmers to Markets through Contracts

Felix B. Lombe, African Institute for Corporate Citizenship (AICC), Malawi

M. Chikhwaza, African Institute for Corporate Citizenship (AICC), Malawi

Abstract: For a long time, much emphasis in agriculture in Malawi has been towards adoption of measures and practices that enhance production and productivity and less on linking farmers to formal markets. Thus, while there have been significant positive strides in the production and productivity sides through the adoption of new production technologies and mechanization, use of improved seed and adoption of good agriculture practices, the marketing aspect has lagged behind and hence flagged red for urgent attention by all sectors and players in the agriculture value chain. There have however been some attempts in an effort to jump start the advancement of the marketing component in the agriculture sector. These include but are not limited to the use and adoption of contract farming, marketing information systems and out-grower systems. Contract farming is a form of vertical coordination largely aimed at correcting the market failure associated with spot markets that arise due to imperfect information such as more or less quantities being produced than what the market can actually absorb. However impact of contract farming on the welfare of smallholder farmers is not thoroughly analyzed in Malawi. An overview of the historical review shows dissenting findings from different authors. Some authors have argued that contract farming improves access to ready markets by smallholder farmers, other studies have suggested that contract farming lowers the incomes of smallholder farmers because contractors wield greater market power over the farmers. This paper contains an analysis of the literature review of the historical analysis of the efforts, models, progress, challenges and the way forward on contract farming in Malawi. This paper makes recommendations based on lessons drawn from specific case studies e.g. rice farmers in Msenjere, Bua and Domasi. The recommendations made include that for contract farming to be effective there is need for a common base for private sector –smallholder partnerships to ensure common goals, clearly defined roles, relationships and results, systematic production processes to guarantee good crop yield, and tight financial controls through thorough record keeping. In essence, the success of contract farming depends on the ability to ensure effective measures are put in place to minimize contract defaults by both parties and abuse of power by dominant firms and the need for government support in developing contract farming supporting policies.

Smallholder rice farmers in Malawi can be profitably included

Rollins Chitika, Malawi Innovation Challenge Fund

Abstract: As technology improves, the way of doing things including agricultural production and marketing is changing. This has seen replacement of millions of small-scale producers and artisans throughout the world by large scale producers as such most small-scale producers are losing their livelihoods. Although inclusive value chains are relevant in ensuring that value chain actors benefit from the chain, a number of questions have been asked in different development circles. Can small-scale producers, artisans, traders be part of this change? Does their inclusiveness contribute to the profitability of the entire sector in the long-run? Is it possible to have even other members of the value chain benefit from being part of it? Showcasing cases of value chains which have been set up to be profitable to all parties in the long run is of much interest for knowledge sharing and also replication. A case study on a privately owned company Mtalimanja Holdings Limited (MHL), in Malawi which initially incorporated 7,000 farmers in its business model indicates that, a commercially oriented value chain can benefit the smallholder farmers. Some of the benefits include access to land (Mpamantha scheme), 40% shares of MHL to be owned by smallholder farmers; access to soft-loans provided by MHL; access to extension services; modern mechanized farming and also access to other financial services. The challenge so far is that MHL is a long term investment hence most benefits are yet to be actualized hence less appreciated by the farmers. A key lesson from this case study is that the setup of MHL shows that the poor (especially small-scale producers) were thoughtfully considered in developing this value chain. As the value chain develops, the benefits are expected to trickle down to farmers.

Parallel Session 3.2: Farmer Access to Markets and Information

Does Access to Markets Improve Livelihood of Rural Households? Case Study of Smallholder Farmers in Rural Malawi

Rodney Lunduka, CIMMYT Zimbabwe

Olaf Erenstein, CIMMYT El-Batan Mexico

Thabbie Chilongo, LUANAR, Malawi

Sam Katengeza, LUANAR, Malawi

Abstract: Livelihoods can be defined as means, activities capabilities, assets and entitlements by which people build a living. Thus the sustainable livelihoods framework developed by DFID, describes five types of assets upon which households can draw from in order to achieve positive livelihoods outcomes. These are, natural, financial, physical, social/political and human. It is also noted that at a given time a household may draw on a particular asset base, in order to acquire other livelihoods asset. For example, farmers may draw on the natural capital (land or soil) through farming, with the ultimate goal of acquiring financial capital (e.g. cash and savings). Similarly, households may draw, on the financial asset, in order to enhance their physical assets (e.g. house). However, availability of and access to assets or capitals is regulated by the existing transforming structures and processes, for example markets and policies. Household livelihoods are not only based on the available capitals, but also on the given opportunities and capabilities to access and acquire the capitals. In Malawi the government has provided rural households with a number of policies and programs that are aimed at increasing agriculture productivity e.g. access to fertilizer and improved maize varieties. These directly address problems of hunger, food scarcity and nutrition. However, the welfare of a household is based on accessing on the entire five asset base. Using household data collected in three district of Karonga, Salima and Chikwawa we assess whether households that access and sale their produce on the market are able to acquire other assets thereby improving their livelihood. Using three variables of ownership of purchased assets, cell phone, clothes, and electronic assets, we found that households that own these assets have sold their maize grain on the market. Selling of maize produce increases the

likelihood of the households, changing the additional output from increased production into other assets. Therefore we conclude that in addition policies that increase productivity e.g. the fertilizers subsidy, increase access to markets, increases the farmer's ability to acquire other assets that contribute to the improvements in household's livelihood. There should be opportunities and policies that ensure that agriculture production meets its fungibility potential. Otherwise the sustainability and success of the productivity enhancing programs cannot be achieved.

Role of interactive Radio Programming Enhanced by Mobile Platforms for Effective Inter and Intra Communication across Agricultural Value Chains

Rex Chapota, Farm Radio Trust

Clement Shema, Farm Radio Trust

Catherine Mloza Banda, Farm Radio Trust

Phillip Chinkhokwe, Farm Radio Trust

Abstract: Agriculture remains the backbone of sub Saharan African economies including Malawi. The sector which is largely composed of smallholder farmers and predominantly rain-fed, is choked by lack of access to critical information for market facilitation resulting in low productivity and low income returns. In Malawi the continuing increase in number of farming families hovering around 3 million, following population growth has overwhelmed the existing agricultural extension services, spurring demand for new approaches that could reach more farmers while facilitating inter and intra communication among actors across the value chains. As Information and Communication Technologies' (ICTs) services and uptake continue to grow worldwide, the ICT ability to bridge the critical knowledge gaps makes it pivotal in development. ICTs such as mobile phones through short message service (SMS) and audio integrated in interactive radio programming offer farmers the voice to access better markets, negotiate for better prices and advocate for favorable market environment. Farm Radio Trust through 'Radio for Farmer Value Chain Development Project' in collaboration with Farm Radio International (FRI) and with funding from Canadian International Development Agency (CIDA), pioneered an innovative ICT enhanced interactive radio programming called Radio Market Place (RMP). This was done through participatory radio strategies to enhance the benefits gained from engaging in the groundnut value chain. RMP based on the 4Ps (product, place, price and profitability) was launched in June 2013, and allowed farmers to gain greater knowledge; connect with other links; improve farm management and marketing skills throughout the groundnut value chain. Through this initiative, FRT noted that the ICTs' significance is not in the technologies as such, but in the possibilities they open up for access to knowledge, information and communications, which are crucial elements in the present day socio-economic interaction. Therefore, adoption of Interactive Radio Programming enhanced by mobile platforms and other ICTs, in agriculture is crucial ensure intra and inter communication process that facilitate marketing decisions among value chains actors as farmers, researchers, government, businesses and citizens as inter-intra communication is guaranteed.

Food Demand and Aflatoxin Consumption in Malawi: A Bayesian Approach

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Abstract: Aflatoxins and mycotoxins are hazardous to human health. Mycotoxin consumption and its effects on health are widely documented but the effects on economic variables are scarce. This study aims at assessing food demand and aflatoxin consumption in Malawi. Using a nationally representative sample from 2010, the study estimates a demand system to estimate price and income elasticities of demand for food. The study then, derives elasticities of aflatoxins consumption from foods consumed by a representative household by location. Results generally indicate that rural poor households consume higher levels of aflatoxins. Furthermore, simulations indicate that income changes have a lasting effect on aflatoxin consumption. The study therefore recommends demand side approaches to curbing aflatoxins should be used in complementing supply side interventions.

Parallel Session 3.3: Food Security

Identifying geospatial zones to guide agricultural development planning in Malawi

Todd Benson, International Food Policy Research Institute, Washington D.C.

Athur Mabiso, International Food Policy Research Institute, Malawi (presenter)

Abstract: Malawi is a country with significant agro-ecological diversity reflecting the diverse landforms associated with the Great Rift Valley that runs the length of the country. These landforms affect soil formation processes, local climates, the distribution of water resources, and vegetation patterns, which result in a variety of complex farming systems. As such any agricultural investments and interventions need to take geospatial characteristics into account. Using crop suitability data from the Land Resource Evaluation Project (LREP) and other sources, this paper analyses agro-geospatial characteristics of Malawi to identify a broad set of agricultural development domains. Initial results suggest that there are about six broad agricultural development domains in Malawi and that intensive fruit production may be best targeted in somewhat warmer areas of the lakeshore with good market access such as Balaka and Salima, particularly if irrigated. A second round of more detailed, sub-sector specific spatial analyses will need to be done to determine the design of specific investments to be made in the identified six development domains.

Perceptions of Prisoners on the Food Security Situation in Malawi Prisons

Hastings B. Moloko, Lilongwe University of Agriculture and Natural Resources

Davies H. Ng'ong'ola, Lilongwe University of Agriculture and Natural Resources

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Fanwel K. Bokosi

Abstract: According to United Nations "Standard Minimum Rules for the Treatment of Prisoners" prisoners should be provided with nutritious food for health and strength, of wholesome quality, well prepared and served. Also, laws of Malawi provide a dietary schedule for prisoners. Despite these provisions, the practice is different. This study aims at finding out the perceptions of prisoners on their food security situation. Food security was understood in terms of access to food and was decomposed into eleven conditions. Using simple random sampling, 1000 inmates from all prisons were interviewed. A high percentage of prisoners consider themselves food insecure. Most prisoners are anxious and worried about whether there would be enough food at their prison. Additionally, many prisoners are not able to eat the kinds of food they prefer, eat a limited variety of foods, and eat food they do not want. Similarly, most prisoners eat a smaller meal than they need, eat fewer meals per day, and use shameful means of obtaining food. However, very few prisoners stay without any food at all, or sleep at night hungry, or stay a whole day and night without eating, or augment prison food with outside supply. Prisoners find prison food to be of insufficient quality. Finally, most prisoners are severely food insecure in access-related conditions, domains and prevalence. Key recommendations are that prisoner food insecurity could be reduced if more prisons were built so that prisoners could be incarcerated closer to their homes where family members could help in feeding them. Also, prisoner food insecurity could be solved if each prison had a professionally operated farm where prisoners grew crops and raised animals for food and income.

Agricultural Output Aggregation at a Crossroads? Insights from the Interface of Mathematics, Agricultural Modernization and Indigenous Knowledge, 1961-2005'

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Boyson Henry Zondiwe Moyo

Abstract: This paper comprises a tale of an interesting twist in a research journey. It engages the debate concerning inter-country agricultural output aggregation as it is employed in agricultural and ecological economic modelling and other studies. The point of departure is given by our dyadic construction of counterarguments against the international dollar measure, on the one hand, and arguments in favor of tonnage and wheat unit output aggregation, on the other hand; and the quest to demonstrate the empirical plausibility and relevance of these arguments. Interestingly, the empirical results challenge both the traditional argument that supports the international dollar, and our counterarguments and arguments, and lead us onto rather totally novel and unexpected 'turf'. All three measures seem to tell the same story. The paper explores the implications and meaning of this central finding. It exposes a lot of ground for new research.

Parallel Session 4: Trade and Industry

The Political Economy of Industrial Policy in Malawi: Some Preliminary Theoretical and Practical Reflections

Blessings Chinsinga, Chancellor College, University of Malawi/Centre for Social Research (CSR)

Abstract: Although the neoliberal onslaught since the turn of the 1980s conspired to discredit the viability of industrial policies in facilitating structural and economic transformation, the disappointing results for most developing countries has resurrected interest in them as potential levers for bringing about sustainable development. Industrial policies have been used throughout the world to expand countries' industrial bases and develop key sectors. According to Khan and Blankenburg (2009), industrial policies consist of sector and industry specific policies that aim to direct industrialization in line with some definition of national interest. Exact interventions vary but generally include targeting and subsidizing credit to selected industries, keeping deposit rates low and maintaining ceilings on borrowing rates to increase profits and retained earnings, protecting import substitutes, subsidizing declining industries, establishing and financially supporting government banks, making public investments in applied research, establishing firm and industry specific export targets, developing export marketing institutions, and sharing information widely between public and private sector. This paper examines the political economy of industrial policy in Malawi inspired by the fact that available data shows that manufacturing production for both domestic consumption and exports has been declining since 1994, which coincided with political liberalization and swift implementation of structural adjustment policy prescriptions as recommended by the IMF and World Bank. In 2007, the apparent downward spiral of the manufacturing sector and the country's export base prompted the government to develop a concept paper as the basis for developing, or rethinking Malawi's industrial policy. In this concept paper, the government observes that "due to significant progress in liberalization of trade and capital and the widespread recognition of the effectiveness of market institutions, industrial policy must come to emphasize a vision, meaning a formulation of the blueprint for a future industrial structure of Malawi...to strengthen the international competitiveness of its industry". This does not mean that Malawi has not been implementing any industrial policy but rather that these policies were not formally articulated as such especially during the one one-party regime. The recognition of the importance of the industrial policy is the first laudable step to begin the transformation process that would create a favorable environment for the implementation of a progressive, pragmatic and robust industrial policy. The main argument of this paper is that Malawi's quest for a genuinely transformative industrial policy is likely to hit a snag because the discussions

thus far have been largely technocratically oriented without squarely tackling some of the key political economy variables that would present serious obstacles to its implementation.

Leadership for Structural Transformation and Development

Blessings Chinsinga, Chancellor College, University of Malawi/Centre for Social Research (CSR)

Trade Impacts of the Cotonou Agreement on Malawi Exports? What Lessons for Economic Partnership Agreements Negotiations?

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Yalenga Nyirenda, Lilongwe University of Agriculture and Natural Resources, LUANAR

Abstract: Negotiations for the Eastern and Southern Africa Economic Partnership Agreement (EPA) are underway. This has sparked contentious debate on whether the switch from a non-reciprocal preferences to reciprocal preferences under the EPA will be beneficial for Malawi and other developing countries. This paper seeks to contribute to this debate by analysing effect of preceding agreement, Cotonou, on Malawi Exports and draw lessons that should be considered in the current negotiations. The study used a gravity model to analyse the impact of non-reciprocal preferences under the Cotonou Agreement on sugar trade flows. The results show that implementation of Cotonou agreement had a negative effect albeit insignificant on the volume of sugar exports from Malawi to the EU. In term of trade flows, trade diversion was detected on sugar exports and total sugar trade at 0.2% and 0.2% respectively. Trade creation effects were only observed on total sugar trade at 0.1%. Based on the results it can be concluded that for Malawi's sugar producers the implementation of the Cotonou agreement did improve market access to European markets but rather opened up third party markets. One of the key lessons from this study is that tariff preferences are not a sufficient condition to improving access to international markets especially where other countries have higher preference margins and are low cost producers than Malawi.