



A LONGITUDINAL TRACKER STUDY ON GROUNDNUT COMMERCIALISATION AND LIVELIHOOD TRAJECTORIES IN MALAWI

Mirriam Matita, Blessings Chinsinga, Loveness Mgalamadzi, Jacob Mazalale, Masautso Chimombo, Stevier Kaiyatsa and Ephraim Chirwa.

Research Note
Issue 1, June 2018

1. Introduction

History has taught us that agricultural development plays a critical role in the structural transformation of economies, through improvements in productivity that allow labour to move to more productive manufacturing and service sectors (Alliance for a Green Revolution in Africa (AGRA), 2016) – yet many African economies have witnessed few improvements in agricultural productivity. Nonetheless, the agricultural sector remains pivotal in people's livelihoods, for both subsistence and employment. Farming systems in Africa are dominated by smallholder production aimed at meeting subsistence needs, with very little geared towards the market. The prevalence of subsistence farming in African agriculture has limited productivity growth, particularly when contrasted with other low-income countries in south-east Asia and Latin America, for example. There have been concerns that limited commercialisation of the smallholder agricultural sector is holding back the sector's potential to drive structural transformation in African economies (Collier and Dercon, 2014).

The challenges posed by smallholder-driven structural transformation in Africa have sparked discussion about the desirability of private sector-led investments in large-scale farming (see Collier and Dercon, 2014). African governments have attracted foreign investments and allocated large parcels of land to private investors and public-private partnerships, to produce crops for both domestic and international markets (Hall et al., 2015). There have also been attempts to commercialise smallholder agriculture through policy reforms (e.g. market liberalisation) as well as through direct interventions (e.g. input subsidisation). The development of pro-agricultural infrastructure – such as roads, telecommunications and energy – has also been explored as a strategy for stimulating agricultural commercialisation.

According to Dorward (2009), agricultural development can contribute to long-term economic development through divergent 'livelihood trajectories', which are divided into four categories: 'stepping-out', 'stepping-up', 'hanging-in' and 'dropping-out'. Agricultural commercialisation may result in positive changes in outcome indicators (such as poverty reduction, food and nutrition security), which have implications for the livelihood trajectories of households as well as individuals. Agricultural commercialisation is deemed successful if more people are 'stepping up' (accumulating and re-investing in the agricultural sector) and 'stepping out' (diversifying and creating non-farm rural economic activity), and fewer people are 'hanging

in' (simply surviving) or 'dropping out' (moving away or slipping into destitution) (Li, 2009).

However, very little research has been undertaken to study the role of smallholder agricultural commercialisation in transforming the livelihoods of smallholder farmers. Such studies require longitudinal research to understand the dynamic processes of drivers and constraints, and the actors who win or lose from the commercialisation of smallholder agriculture. The Agriculture Policy Research in Africa (APRA), comprising a series of studies, intends to study the long-term dynamics of agricultural commercialisation and its impacts on livelihoods through longitudinal research, gathering and incorporating data collected at different points over time, to gain a broader, historical understanding of the smallholder commercialisation landscape.

APRA seeks to generate new evidence on agricultural commercialisation pathways in rapidly changing rural contexts in Africa, assessing outcomes in relation to poverty, women's empowerment and food and nutrition security. In Malawi, APRA intends to study the role of groundnut commercialisation in promoting different livelihoods using a tracker study in groundnut farming areas, based on data collected in the 2006/07 agricultural season (School of Oriental and African Studies (SOAS) et al., 2008). The 2006/07 dataset is the benchmark or baseline that will be used as a reference point in the present APRA study. This study intends to track every member of the households in the 2006/07 dataset in Malawi's Mchinji and Ntchisi districts, to understand the role of agricultural commercialisation in their current livelihoods.

2. The groundnuts 'commercialisation story'

In Malawi, agriculture still accounts for more than one third of the economy, and is a source of income for about 90 percent of the rural population (Chirwa, 2014). Agricultural produce dominates Malawi's export market, accounting for more than 90 percent of export earnings – with key export commodities including tobacco, sugar and tea.

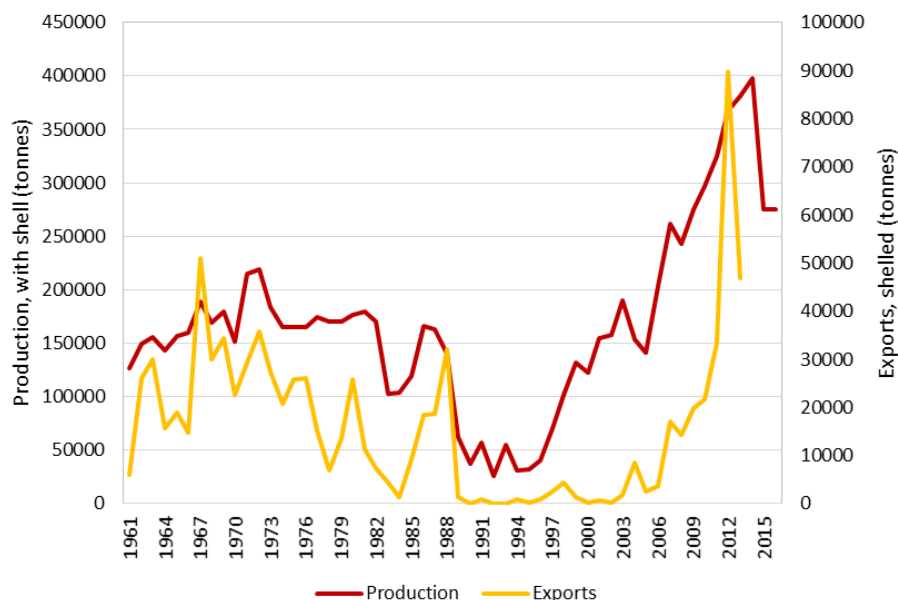
Groundnut production and marketing has fluctuated greatly since 1961. In the 1970s and 1980s, groundnuts were one of Malawi's key export crops, largely grown by smallholder farmers and marketed by a state-owned agency, the Agricultural Marketing and Development Corporation (ADMARC). ADMARC held monopoly powers in the purchase of agricultural produce from smallholder farmers and enforced quality standards

that enabled the export of groundnuts (Fitzgerald, 2015). Figure 1 shows the production (with shells) and export (shelled) trends in groundnuts since 1961. From the 1960s to the 1980s, groundnut production was stable at around 150,000 tonnes per year, with exports averaging 19,000 tonnes per year. A sharp drop at the beginning of the 1990s saw production decline to below 50,000 tonnes; this figure remained low throughout the decade, with recovery beginning in 1999. Exports of groundnuts in this period followed suit, falling to zero in 1992 and 1993 before a resurgence in the mid-2000s. Diaz Rios et al. (2013) estimate that exports declined from 64 percent of production in the 1980s to 0.2 percent in the 1990s. Several factors contributed to the dip in the 1990s, including the collapse of ADMARC, produce price liberalisation, problems caused by aflatoxins, poor seed quality and low market prices (Fitzgerald, 2015; Diaz Rios et al., 2013).

expansion of the total area under groundnut cultivation, along with the resumption of exports in 2005. In 2008, the government introduced legume seeds subsidies, including groundnuts, under the Farm Input Subsidy Programme (FISP), placing the promotion of groundnut production at the level of national policy (Chirwa and Dorward, 2013). In a liberalised market environment, NASFAM provides a stable market for groundnuts, while farmers themselves have several market options – such as small traders and manufacturers – as well as having contract farming opportunities to produce groundnut seeds.

The other important development in the groundnut sector is the establishment of Afri-Nut - a peanut plant financed and co-owned by shareholders from the commercial and development sectors, including NASFAM, Twin, Ex-Agris, Cordaid and Waterloo

Figure 1 Groundnut production and exports, 1961 - 2016



Source: FAOSTAT

There have been several interventions that have contributed to the revival of the groundnut sector in Malawi. The revival began in the early 2000s through efforts by the National Association of Smallholder Farmers of Malawi (NASFAM) and International Crop Research Institute for the Semi-Arid Tropics (ICRISAT), wherein farmers were introduced to more advanced agricultural business practices – including the identification of higher-yielding seed varieties, and cheaper methods for detecting and controlling aflatoxins (Fitzgerald, 2015; Diaz Rios et al., 2013). Production rose from 130,000 tonnes in 2000 to 270,000 tonnes by 2010, with yields increasing by 128 percent during the same period (Derlagen and Phiri, 2012); this renewed production growth allowed for

Foundation (Diaz Rios et al., 2013; Fitzgerald, 2015). The aim of Afri-Nut is to integrate Malawian smallholder groundnut producers across the value chain, and to expand the volume of Fairtrade and other value-added groundnuts produced for international, regional and domestic markets. This has helped to develop further linkages between local farmers and premium export markets – with one smallholder association in Mchinji forming partnerships with Fairtrade, Liberation Foods and Afri Nut. Liberation Foods supplies about 80 percent of Fairtrade-certified nuts in the UK sourced from Africa and Latin America. While Mchinji district has market links to premium export markets through Fairtrade, this is not the case in Ntchisi – a district where NASFAM has also invested in processing facilities. This

makes a comparative analysis of these dynamics in the two districts, and their effects on commercialisation pathways, of interest to this study.

Although there have been studies in groundnut production and marketing (such as Fitzgerald, 2015), few have addressed the impacts of agricultural commercialisation on livelihoods. APRA's study proposes to use quantitative data collected in 2006/07 as part of the Agricultural Input Subsidy Programme (AISP) evaluation. The data includes a sample of 240 households in villages within Mchinji and Ntchisi districts, both of which are NASFAM focal districts for groundnut production. The 2006/07 dataset has variables for computation of the extent of commercialisation, employment, farming decision-making, food security, asset index, incomes and subjective poverty assessment.

3. Core research issue, questions and hypotheses

The main objective of the APRA tracker study is to explore how different pathways of smallholder groundnut commercialisation evolve over time, from a wider historical assessment of the dynamics of agrarian change. In addition, we aim to investigate how these pathways influence the livelihood opportunities and outcomes of rural women and men in different contexts. The following are the main research questions the tracker study intends to investigate:

- What are the incentives and motivations of smallholder farmers to engage with and disengage from commercialisation?
- How do local-level politics – relating particularly to land ownership, social relations and patterns of accumulation of productive resources – promote or affect smallholder farmers' engagement in commercialisation?
- What has been the impact of commercialisation in the livelihood trajectories of households and individual household members?
- How has commercialisation impacted poverty, empowerment, employment and food security for households and individual household members?
- Are there gender or social discrepancies in the impact of commercialisation on poverty, food security and livelihood trajectories?
- What are the differential impacts of engagement and non-engagement with premium export markets?
- What factors explain the different livelihood trajectories that result from commercialisation?

The following hypotheses will be tested:

- The nature of local politics is critical in determining the levels and patterns of smallholder commercialisation.
- Increased commercialisation allows households and individuals to step-up agricultural activities and step-out of agriculture over time.
- A higher degree of commercialisation equates to greater poverty-reduction, enhanced food security, more employment opportunities and further empowerment of women.
- Members of more commercialised households are more likely to step-up and step-out of agriculture.
- Integration with the premium export markets is more likely to facilitate stepping-out by household members – hence the high incidence of stepping-out in Mchinji district in comparison to Ntchisi district.

4. Research strategy and design

The study will track the households and individuals in Mchinji and Ntchisi districts who were surveyed in the 2006/07 agricultural season survey. This tracking will take place at least 10 years after the benchmark survey, and it is expected that some of the household members will have moved out of the households to pursue their own independent livelihoods. The study will attempt to include those individuals who have migrated away from the households in which they were originally located during the 2006/07 survey.

The study intends to use mixed research methods, integrating both qualitative and quantitative research. The study will thus employ a sequential explanatory mixed methods research design (Creswell and Clark, 2011; Creswell, 2009). The quantitative component will assess the households' livelihood trajectories regarding groundnut commercialisation. The qualitative component will be used to explain the dynamics observed in the quantitative component. The qualitative approach will use focus group discussions, key informant interviews and in-depth life histories of selected households in different livelihood trajectories to collect data. This will be done in the following ways:

- There will be a reconnaissance qualitative study in 2 selected villages in both Mchinji and Ntchisi districts, using focus group discussion at village level and key informants at community, district and national levels. The main objective of the reconnaissance study is to gain a better understanding of changes in livelihoods and their drivers, to inform the design of data-collection tools for the main study.

- The main data-collection is expected to be carried out in 2 waves: the first wave (Wave I) will focus on quantitative tracker data-collection, based on the 2006/07 benchmark data, focus group discussions and key informant interviews in the study villages. The main objective will be to understand the agrarian dynamics, the enablers and the constrainers of commercialisation from a historical perspective, including a trend analysis in APRA outcome indicators.
- The second wave (Wave II) will be carried out following a preliminary analysis of the quantitative tracker data. This component will be largely qualitative in nature, using in-depth interviews to generate life stories of selected households in different livelihood trajectories. The study will proceed by (1) using the quantitative data to identify households that have experienced different livelihood trajectories – dropping-out, hanging-in, stepping-up and stepping out; and (2) selecting 12 households from each livelihood trajectory group (48 households in total), for detailed life histories mapping the role of commercialisation in their trajectories.

The quantitative study will be based on the benchmark 2006/07 study of 240 households in Mchinji and Ntchisi districts. It is expected that with a 10-year period since the benchmark survey was conducted, the total number of households to be surveyed is likely to have increased, with individual members from the benchmark dataset forming new households. The study expects the final sample to reach at least 500 households. Most longitudinal surveys follow households or the same respondents over time; some studies track individual household members rather than the initial household or respondents in order to minimise attrition, to deal with selectivity bias and to understand the welfare changes of ‘movers’ and ‘stayers’ (Witoelar and Kastelic, 2013; Witoelar, 2011). This study intends to proceed in the following ways, based on the methods in Beegle et al. (2011):

- Using the benchmark study, this study will track the original households and conduct a household questionnaire with the original households.
- For household members that have moved out of the original household, the study will complete a Household Member Tracking Form with details of their new location and contacts of the individual, if known.
- The study will conduct a household questionnaire with the tracked household members and their new household.

The methods of analysis will include descriptive statistics, cross-tabulation, and econometric models. The benchmark survey and the tracker will form a two-period panel with a wider panel in the tracker study,

but originating from the same benchmark households. This two-period panel will allow estimation of difference-in-difference models of the link between commercialisation and outcome indicators. In addition, logit or probit models will be estimated to explain determinants of livelihood trajectories. Qualitative analysis will include content and thematic analysis after coding the data in Atlas.ti. Historical analysis, taking a decade-by-decade discussion of past events since the 1980s, will aid understanding of the livelihood trajectories.

We anticipate several challenges in implementing the tracker survey. First, there may be a high attrition rate given that the tracked households were interviewed 10 or more years ago – this is likely to reduce the expected sample size for the study. Secondly, the movement over time of household members being tracked may require the survey teams to travel extensively across the country. Thirdly, the preceding 10 years has witnessed many intervening policies and programmes in different areas that may have influenced the outcome indicators.

5. Key characteristics of the benchmark data (2006/07)

Our baseline data was collected as part of the 2006/07 Malawi Agricultural Input Subsidy (AISP) evaluation. One of the requirements for inclusion of the dataset in APRA studies was that we should be able to compute indicators of interest. Below, we present the demographic characteristics and some indicators of agricultural commercialisation from the data set.

The 2006/07 dataset has 240 heads of household with an average age of 47 years, and for whom farming provides primary employment. About 81 percent of these heads of household are male, and the majority (82 percent) are married. The total population of the dataset is 1,359 members, of which 46 percent were adults (>18 years) in 2006/07 – as shown in Table 1. A majority of the 10-17 age group in 2006/07 are now adults, possibly pursuing their own independent livelihoods. This gives a provisional total of 1,682 adult household members to be tracked.

Regarding key indicators on commercialisation (Table 2), the 2006/07 data shows that about 50 percent of households engaged in groundnut cultivation, and only 16 percent of households hired labour for use in their farming activities. About 70 percent of households experienced maize shortages before the 2007 harvest. There is a wide variation in the length of time during which different households experience maize shortages – from 1 to 12 months, with a reported

Table 1: Age distribution of household members by gender in 2006/07

Age category	Number of members		
	Male	Female	Total
Under five	81	109	190
5 – 9 years	110	108	218
10 - 17 years	174	149	323
18 – 24 years	98	76	174
25 – 29 years	42	51	93
30 – 39 years	57	63	120
40 plus years	125	116	241
<18 years	365	366	731
>18 years	322	306	628

Source: Computed from 2006/07 AISP Evaluation Data

Table 2: Key indicators on commercialisation (mean values)

Variable	Mean	SD	Min	Max	N
HH engaged in g/nut cultivation (0/1)	0.502	0.501	0	1	239
HH hired farm labour (0/1)	0.163	0.370	0	1	239
Maize ran out before 2007 harvest (0/1)	0.704	0.457	0	1	240
Time taken for maize shortages (months)	7.09	4.21	1	12	240
Value of durable assets (US\$)	158.90	882.44	0	11,453	240
HH own poverty assessment is 'poor' (0/1)	0.954	0.210	0	1	240
HH satisfied with life in 2007 (0/1)	0.258	0.439	0	1	240
Had adequate food in past year (0/1)	0.425	0.495	0	1	240
Had adequate food in past month (0/1)	0.688	0.464	0	1	240
Obtained subsidised fertiliser (0/1)	0.510	0.501	0	1	240
Obtained fertiliser using own cash (0/1)	0.322	0.468	0	1	239
Land ownership (ha)	2.005	2.401	0	23	239

Source: Computed from 2006/07 AISP Evaluation Data

Note: (0/1) imply Dummy Variable equals 1 if aspect, zero otherwise.

Table 3: Share of marketed crops

Share of harvest (crop) marketed	Obs	Mean	Std. Dev.	Min	Max
Ground beans	6	0.083	0.204	0	0.5
Groundnuts	116	0.050	0.154	0	1
Beans	12	0.054	0.131	0	0.411
Soy beans	64	0.468	0.418	0	1.133
Tobacco	47	0.731	1.461	0	10
Sweet Potatoes	15	0.048	0.184	0	0.714

Source: Computed from 2006/07 AISP Evaluation Data

average of 7 months. Only 43 percent reported adequate food supply in the year prior to the survey. Further, most households (95 percent) assessed themselves as being 'poor' in 2007. Close to 53 percent obtained fertilisers through a government farm input subsidy programme,

which targets land-owning but resource-constrained farmers with fertiliser and improved seed.

Several crops were sold on the market – predominantly soya beans and groundnuts (Table 3), with the staple,

maize, among the lowest in terms of quantity sold. The 2006/07 data shows an average commercialisation index of 0.13, with plus/minus 0.25 standard deviations. A closer look in Table 3 shows a higher proportion of tobacco and soy beans were sold. The other crops were cultivated by a negligible number of farmers. We find that while many households cultivated groundnuts, only 5 percent were sold – raising interesting questions about what changes have emerged in groundnut marketing over the last 10 years.

6. Conclusion

This research will investigate how households in Mchinji and Ntchisi districts are engaging with crop markets, and any changes over the 10 year period. Households surveyed in the 2006/07 benchmark survey will be

tracked to determine the extent of commercialisation (i.e. investments in agriculture; engagement with markets; etc.) and its effects on their livelihoods. We will compare Mchinji district – where households enjoy fair trading and premiums for their groundnuts – with Ntchisi district, where such market conditions do not prevail. Using both quantitative and qualitative data in a sequenced approach, the study will focus on the motivations for and constraints to commercialisation, the factors facilitating commercialisation and how local-level politics, together with other social factors, either promotes or discourages market engagement. We will also adopt a historical approach to trace the story of groundnut commercialisation in the two districts over time, and how it has played a catalytic role in overall observed livelihood trajectories.

References

- AGRA (2017). Africa Agriculture Status Report: The Business of Smallholder Agriculture in Sub-Saharan Africa. Nairobi, Kenya: Alliance for a Green Revolution in Africa (AGRA). Issue No. 5.
- AGRA (2016) Africa Agriculture Status Report: Progress Towards Agriculture Transformation in Sub-Saharan Africa. Nairobi. Kenya. Issue NO. 4.
- Beegle, K., De Weerd, J., Dercon, S. (2011). Migration and Economic Mobility in Tanzania: Evidence from a Tracking Survey. *The Review of Economics and Statistics* 93 (3): 1010-333.
- Chirwa, E. W. (2014) Smallholder Agricultural Development in Malawi in the Past 50 Years: Has Public Policy Resulted in Unsuccessful Transformations? The 16th Professorial Inaugural Lecture delivered in the Great Hall at Chancellor College, University of Malawi on 29th October 2014.
- Chirwa, E. and Dorward, A. (2013) *Agricultural Input Subsidies: The Recent Malawi Experience*, Oxford: Oxford University Press.
- Collier, P. and Dercon, S. (2014) African Agriculture in 50 Years: Smallholders in a Rapidly Changing World? *World Development*, 63 (Nov), 92–101.
- Creswell, J. (2009). *Research Design. Qualitative, Quantitative and Mixed Methods Approaches* (3rd ed.). Thousand Oaks Calif.: Sage Publications.
- Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research* (2nd ed). Thousand Oaks, California: SAGE Publications.
- Derlagen C. and Phiri H. (2012) *Analysis of Incentives and Disincentives for Groundnuts in Malawi*. Technical Notes Series, MAFAP, FAO, Rome.
- Diaz Rios, L., Gokah, I.B., Kauma, B. C., Njoroge, S. and Aubrey, C. (2013) *Advancing Collaboration for Effective Aflatoxin Control in Malawi*. STDF Project Preparation Document, Malawi Programme for Aflatoxin Control (MAPAC).
- Dorward, A. (2009) Integrating Contested Aspirations, Processes and Policy: Development as Hanging In, Stepping Up & Stepping Out. *Development Policy Review* 27 (2): 131-146.

Fitzgerald, G. (2015) The Production of Ready to Use Therapeutic Food in Malawi: Smallholder Farmers' Experience with Groundnut Production - Results from a Four-Year Livelihoods Analysis in Malawi's Central Region. Research Report, University College Cork, Ireland.

Hall, R., Scoones, I. and Tsikata, D. (2015) Africa's Land Rush: Rural Livelihoods and Agrarian Change, Suffolk: James Currey

Li, T.M. (2009). Exit from Agriculture: A Step Forward or a Step Backward for the Rural Poor? *Journal of Peasant Studies* 36(3): 629-636.

School of Oriental and African Studies, Wadonda Consult, Overseas Development Institute and Michigan State University. 2008. Evaluation of the 2006/7 Agricultural Input Supply Programme, Malawi: Final Report, London, School of Oriental and African Studies; March 2008.

Citation: Matita, M., Chinsinga, B., Mgalamadzi, L., Mazalale, J., Chimombo, M., Kaiyatsa, S. and Chirwa, E. (2018) *A Longitudinal Tracker Study on Groundnut Commercialisation and Livelihood Trajectories In Malawi*, APRA Research Note 1, Future Agricultures Consortium

© APRA 2018

ISBN: 978-1-78118-464-6



This is an Open Access report distributed under the terms of the Attribution-Non Commercial-No Derivs 3.0 Unported (CC BY-NC-ND 3.0) Attribution — You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. NonCommercial — You may not use the material for commercial purposes. NoDerivatives — If you remix, transform, or build upon the material, you may not distribute the modified material. You are free to: Share — copy and redistribute the material in any medium or format.

<https://creativecommons.org/licenses/by-nc-nd/3.0/legalcode>

If you use the work, we ask that you reference the APRA website (www.future-agricultures.org/apra/) and send a copy of the work or a link to its use online to the following address for our archive: APRA, Rural Futures, University of Sussex, Brighton BN1 9RE, UK (apra@ids.ac.uk)



**The Agricultural Policy Research in Africa (APRA) programme is a five-year research consortium.
APRA is funded with UK aid from the UK government and will run from 2016-2021.**

The programme is based at the Institute of Development Studies (IDS), UK (www.ids.ac.uk), with regional hubs at the Centre for African Bio-Entrepreneurship (CABE), Kenya, the Institute for Poverty, Land and Agrarian Studies (PLAAS), South Africa, and the University of Ghana, Legon. It builds on more than a decade of research and policy engagement work by the Future Agricultures Consortium (www.future-agricultures.org) and involves new partners at Lund University, Sweden, and Michigan State University and Tufts University, USA.

Funded by

