



Agricultural intensification and gender in Malawi, Tanzania and Zambia

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At a glance

We have collected data on agricultural intensification from 23 farming communities in seven regions in Malawi, Tanzania and Zambia since 2008. Policies in all countries have a strong focus on maize intensification and also target women as recipients of subsidized farm inputs. Data on maize shows that only in the Zambian region has there been a sustained increase in yields, but this has been tied to a persistent gender gap. In the other two countries, yields have been stagnant. In the case of Malawi this is explained by poverty, land fragmentation and a gradual depletion of natural resources. In the case of Tanzania, withdrawal of subsidy schemes for maize in combination with new commercial opportunities in rice and tree crops appear to be changing land use patterns. Despite these differences, women are united by some common characteristics: generally women experience mobility constraints as a result of domestic chores and socially restrictive norms. Moreover, the condition for co-financing to access subsidies disadvantages poorer households – many of which are headed by women. Finally, women's access to labour is limited, both that of men in particular, but also the drudgery of their own domestic tasks and care burdens imposes restrictions on their time. The seasonality of smallholder agriculture means that the effects of these shortages on intensification are aggravated. Policies need to redress all of these aspects, for instance through rural electrification and expanding basic healthcare for children, encouraging small scale enterprises among women and gender sensitization campaigns that involve men as well as women.

The findings and recommendations presented here are based on research carried out as part of the Afrint IV project 'Equity and Institutions in Sustainable African Intensification' – a project designed to analyse patterns of smallholder intensification in Tanzania, Malawi and Zambia.



Points of departure

The overarching aim of Afrint IV is to analyse patterns of sustainable agricultural intensification with particular attention to: (a) gender and youth; and (b) ways in which existing rural institutions can be enabled and incentivized to improve equity given prevailing policies, norms and structures. The three countries are different in terms of geography and socio-economic conditions, but all have agricultural policies that target women farmers specifically. As such they are interesting to compare and can provide policy lessons that are relevant to different contexts. This particular policy brief covers three areas

1. We trace intensification trends in maize for the three countries and look at whether female landholders have been involved in agricultural intensification
2. We discuss the prospects for women to be involved in agricultural intensification based on their access to agrarian resources
3. We present some recommendations for policy makers based on our findings

Longitudinal quantitative data was collected from 23 farming communities in seven regions in Malawi (4), Tanzania (2) and Zambia (1). Households have been followed since 2008 and revisited in 2013 and 2017. Households that left the study due to death or migration have been replaced continuously. In this way we were able to follow the livelihoods and intensification trends in these communities over ten years. In total, quantitative data was collected from 1071 households in 2017, out of which 999 households grew maize. This data has been collected from farm managers, with around a third being female. Most women do not head their own households, however, but live in households headed by their parents or other older relatives. Qualitative interviews have therefore been carried out with both spouses in dual-headed households as well as with women heading their own households. In addition, focus group interviews have been organized and key informants, for instance community leaders, extension agents and agro-dealers have been interviewed.

Findings

Policies on agriculture and development

Intensification in staple crops, and in maize in particular, has been the focus of agricultural policies in all three countries for many decades. All countries have followed a path of strong state intervention in the post-independence period, replaced by its withdrawal in the structural adjustment era, followed by piecemeal and targeted involvement from the mid-1990s. Such interventions have been gradually upscaled from the early 2000s onwards, with subsidized inputs being the primary mode of involvement. Since around 2010 fertilizer support programmes in all three countries deliberately target women-headed households. The requirement of co-financing on the part of the recipient in practice also excludes resource poor households, such as women-headed households.

Agricultural intensification trends in the three countries

We document trends in yields (using three season averages) and show that the only country with a sustained increase in yields is Zambia, where maize yields increased by 45% for male landholders and 22% for female farm managers between the 2006-2008 growing seasons and the 2015-2017 growing seasons. The average yield in the latter season was around 2000 kg/ha. Increases in yields can be explained both by the uptake of fertilizer and improved seeds, but oxenization is the big difference – with the use of oxen or a tractor for ploughing increasing from 25% to 43% over the period.

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By contrast, maize yields in Malawi and Tanzania have been largely stagnant standing at around 1200 kg/ha for Malawi and 1400 kg/ha for Tanzania over the period. Data on land use and agricultural techniques from Malawi show that soil fertility is falling and agriculture is becoming gradually more labour intensive as a result. In the case of Tanzania, stagnant yields in maize are explained in part by changes in marketing patterns and a growing interest in rice and other crops.

Possibilities for participating in agricultural intensification by gender

In Zambia, intensification in maize has benefited both male and female landholders, but this has been accompanied by a persistent gender gap in yields. This is explained by the superior position of men with respect to key resources, such as livestock. Being able to access and use agricultural resources such as oxen, labour and capital intensive inputs such as pesticides, at the right time advantages men. By contrast, women who lack capital or do not have a man to defend their interests with respect to scarce resources are disadvantaged in the village context. Lack of labour is reflected in smaller farm sizes among female landholders.

In Malawi, gender gaps are gradually closing in two of the four regions. Data on technology use and access to other resources points to a process of de-intensification in which the narrowing of such gaps is related to the worsening position of male farmers, rather than improvements among female landholders. Nonetheless, men have superior access to labour, although nearly a quarter of male landholders stated that they had shortages of labour. On the whole, de-intensification trends in Malawi are connected to an intersection between shortages of capital, land and labour and a gradually diminishing natural resource base.

In Tanzania, low productivity in maize is explained by the gradual withdrawal of state subsidies on inputs, but also changes in land use and production as commercial opportunities in rice and in tree-crops are emerging. In the case of rice producing regions, this has been coupled also with changes in the land market and changes in gender norms, with women in male-headed households increasingly renting land to raise independent incomes. Commercialization in tree crops, by contrast appear to be benefiting male landholders to a greater extent.

Despite these differences between Malawi, Zambia and Tanzania, women across the countries are united by some common characteristics: generally women experience mobility constraints as a result of domestic chores and socially restrictive norms. Moreover, the condition for co-financing to access subsidies disadvantages poorer households – many of which are headed by women. Finally, women's access to labour is limited, both that of men in particular, but also the drudgery of their own domestic tasks and care burdens imposes restrictions on their time. The seasonality of smallholder agriculture means that the effects of these shortages on intensification are aggravated.

Policy implications

Agricultural policies in all three countries have a strong focus on maize intensification and deliberately target women through subsidized inputs, yet, only Zambia shows a sustained growth of maize yields, and here this is tied to a productivity gap between male and female landholders. Lack of capital and labour explains part of this gap, but it is also tied to social norms found both within the community at large as well as within households. Policies need to redress all of these aspects.

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Recommendations

- Easing women's care burdens and the drudgery of domestic work, is an indirect way of addressing labour shortages in households headed by single women. Investments in child health facilities, electrification and clean water may be more important than improving women's access to technologies that raise agricultural productivity.
- Improving women's possibilities for raising an independent income, through policies that encourage small scale enterprises and income generation from the non-farm sector especially can ease capital constraints and enable co-financing of subsidies.
- Gender sensitization campaigns need to redress social norms that subordinate women, both in the community as well as within households. Crucially, husbands need to realize that enhanced opportunities for their wives is compatible with improvements in their own livelihoods. In Tanzania, improvements in housing standards in male headed households have resulted from women raising incomes from agriculture through renting land. The demonstration effect of such improvements can potentially change gender norms over time.

Further Reading

Andersson Djurfeldt, A., Hillbom, E. and E. Msuya (forthcoming) Ricing fortunes - agricultural growth, farm intensification and paddy specialization in two Tanzanian villages, in Brockington and Noe (eds.) *Assets, Prosperity and Rural Livelihoods. Insights from Longitudinal Studies in Tanzania*, Oxford University Press

Andersson Djurfeldt, Agnes, Hillbom, E., Mulwafu, W.O., Mvula, P. and G. Djurfeldt (2018): "The family farms together, the decisions, however are made by the man"—Matrilineal land tenure systems, welfare and decision making in rural Malawi, *Land Use Policy*, 70:601-610.

Andersson Djurfeldt, A. and Hillbom, E. 2016. Pro-poor agricultural growth – Inclusion or differentiation? Village level perspectives from Zambia, *Geoforum*, Vol. 75, pp. 220-233.

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About SAIRLA

SAIRLA is a UK Department for International Development funded initiative that seeks to address one of the most intractable problems facing small-holder farmers in Africa – how to engage in the market economy and to deliver sustainable intensification of agriculture which avoids negative impacts on the environment. The programme is managed by WYG International Ltd and the Natural Resources Institute, University of Greenwich. For more information visit www.sairla.nri.org

About Afrint IV

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programme (SAIRLA). For more information about Afrint IV see
www.keg.lu.se/en/research/research-projects/current-research-projects/afrint/afrint-ivAfrintIV/Papaya-0