Pro-Poor Agricultural Growth – Village Dynamics and Commercialisation Pathways

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CONTENTS

1. INTRODUCTION

This paper takes a village-level perspective, drawing on an earlier study that used the same data, which suggested that patterns of pro-poor agricultural growth were highly spatially concentrated to particular villages (Andersson Djurfeldt 2013). Qualitative fieldwork in these villages has since aimed to identify any common institutional explanations to such growth, viz. gendered rights to land and markets. This paper follows up on the trends found in the quantitative data and aims to operationalise the concept of pro-poor agricultural growth to distinguish between patterns of longer-term growth (from 2002 onwards) and more recent patterns of growth found since 2008. The purpose is to compare such patterns to shed light on the drivers of commercialisation in different village settings and in different time periods, to identify which markets and which crops hold the largest promise for pro-poor agricultural growth.

The concept and practice of pro-poor agricultural growth rests on three basic tenets all emanating from a heritage of smallholder-based agricultural development: raising productivity, linking small-scale farmers to output markets, and promoting inclusivity through these interventions. In practice, particular strategies have tended to vary across countries, and also to some extent within countries, although emphasis has commonly been placed on easing smallholder access to farm inputs through various fertiliser subsidy schemes. Less attention has been paid to smallholder commercialisation in the literature, with the assumption often being that small-scale farmers are getting a raw deal at the hands of middlemen, wholesalers and contracting companies (see Sitko and Jayne 2014 for a discussion that points to the pitfalls of such assumptions).

At an overarching level, pro-poor agricultural growth perspectives have been questioned both by researchers querying the smallholder agenda as a whole (Collier and Dercon 2013) and by scholars taking a critical view of market integration as a source of class-based differentiation within peasant societies (Bernstein and Oya 2014). At a very basic level, therefore, the present paper aims to ascertain whether pro-poor growth exists, starting with a few simple empirical questions. Are there villages in which agricultural commercialisation is promoting increased welfare and broad-based inclusion? Does recent growth follow on the heels of longer-term growth, or have growth patterns shifted geographically over time? Which sub-sectors can explain local-level growth dynamics and do these vary depending on the type of growth (short-term versus more sustained growth)? And finally, what policy implications arise from particular patterns of growth?

2. METHODOLOGY AND RESEARCH DESIGN

In dealing with these questions, my starting point is a village-level perspective which draws on studies that point to the spatial concentration of rising agricultural productivity (Wiggins 2000; Binswanger-Mkhize, McCalla *et al*. 2010; Andersson Djurfeldt and Djurfeldt 2013) and sub-sector growth dynamics (Wiggins 2005; Haggblade and Hazell 2010). In turn, this suggests that localised growth dynamics may be concealed by broader country-level trends, although the possibilities of studying a variety of dynamic village settings may provide grounds for generalisable policy lessons.

2.1   Data sources and site identification

Like the other two syntheses (Andersson Djurfeldt 2017a, 2017b), this paper draws on the Afrint database, which was collated by six country teams in 55 villages in 15 regions across Ghana, Kenya, Malawi, Mozambique, Tanzania and Zambia. Data have been collected in three rounds: 2002, 2008 and finally in 2013 (Ghana, Kenya, Malawi and Zambia) and 2015 (Tanzania and Mozambique).

A multiple stage purposive sample has been drawn, with first the selection of countries, then regions, and finally villages. Regions and villages were deliberately selected to provide variety within the broad scope of the original research project (to identify sites of potential intensification (see Djurfeldt, Holmén et al. 2005 for a discussion of the original principles for site selection). Dynamic and less dynamic regions were purposively sampled, and in this sense the concentration of growth dynamics (whether long-term or more recent) to the dynamic regions is to be expected.

The database contains data on three types of households: (1) Households that have been part of both panels (all three rounds of data collection); (2) Households that have been part of one of the two panels; and (3) Households that have only been part of one of the cross sections.

The ambitions of both the data collection effort and the quality of the data have developed over time, and the final round of data are therefore superior in quality as well as in nuance. Hence, one challenge in capturing change over time is to deal with the fact that some variables were not gathered during the first round of data collection. The most obvious example here is cash income data, which were not collected in 2002, but were collected in the two subsequent rounds.[1]

In terms of commercialisation, only the data for the three grain crops covered by the survey (maize, rice and sorghum) contain information on amounts sold, whereas data on market participation exist for a number of food crops and cash crops. For the data collection rounds of 2008 and 2013 these can be complemented by cash income raised from sale of grains, other food crops, cash crops and animal products, but data are not available on the amounts produced or sold for non-grain crops in either year.

A final caveat relates to gender: the village samples are small and it is therefore not possible to compare the data for male- and female-managed households, since the limited sample size raises the risk for type 2 errors.

The first two syntheses produced for APRA on the basis of this data have dealt with country and regional perspectives, and as such this final synthesis constitutes a complement since it engages with a village-level analysis. While earlier papers have considered incomes, commercialisation and food security, this paper broadens the discussion to look at local-level processes of pro-poor growth by attempting to identify two types of villages: (1) Villages where there have been what I call long-term growth dynamics, i.e. a process of agrarian-based, inclusive growth that started in 2002 and has been sustained since then; and (2) Villages where recent pro-poor growth has occurred, i.e. it has taken off since 2008. In some cases, as shall be seen below, the two types overlap.

To operationalise the concept of pro-poor agricultural growth, three aspects have been focused in the analysis: increases in commercialisation, poverty reduction and inclusivity. Since the aim is to shed light on change over time, data will be used primarily for the panel households to construct indicators of long-term and recent growth respectively.

2.1.1 Long-term growth dynamics

For long-term growth, the steps in site selection were as follows:

1. An indicator was constructed for both panels (2002–2008 and 2008–2013 respectively) which identifies households that were able to save both at the start and end of the period and either (a) at the same time increased their (net) agricultural commercialisation either through increasing the amount of grains sold or entering the markets for grains, other food crops, cash crops or animal produce while raising less than 50 percent of their income from the non-farm sector; or (b) through specialising in agriculture throughout the period. Households that increased commercialisation or were specialised in agriculture while being able to save at both points in time could be considered to be producing surplus financial capital based primarily on agriculture.

2. To select the villages in question, the share of households of the village sample that fulfilled these criteria was calculated for both panel periods. This ranged from zero to 43 percent of the panel households for the 2002–2008 panel, and zero to 65 percent in the latter period, 2008–2013. The difference between the two panels was calculated and the villages were ranked in reverse order. The differences ranged from -31 percent (meaning that around a third fewer households fulfilled the two criteria for the second panel period than the first in this particular village) to 65 percent. Hence, in those villages where the difference was positive, panel households had relatively speaking the lowest savings and low commercialisation or agricultural specialisation in the first period but had attained a stable pattern of saving and agricultural specialisation and commercialisation in the second period. In turn, this suggests that these villages were characterised by growth dynamics that began some time during the first period and continued until the final phase of data collection in 2013.

3. Since attrition on average has been 30 percent between the first and final rounds of data collection the panel households are relatively small sub samples of the cross sections, and panel bias is also a well-known problem of panel studies. The households that are prone to leave the panel are the older households who leave through death or the ones that leave the village itself through migration. To control for this and to add the aspect of inclusivity, the savings data (i.e. whether households were able to save or not at the time of data collection) for the village as a whole in each cross section was added as a final criterion.

4. Villages where the net difference between the first and second panel with respect to the indicator outlined in (2) was positive (and statistically significant) were selected if there had been a rise in savings ability in the cross section since 2002. This was judged to indicate widespread inclusive improvement in the villages in question, meaning that dynamics of pro-poor agricultural growth were not occurring at the expense of the broader village population.

Thirteen villages fulfilled all of these criteria. 2.1 presents the villages and the data used to select them. The first two columns of the table present the share of households in each village that fulfilled the criteria for long-term growth as outlined above. Mkwezi in Zambia had the largest difference in shares, with none of the households fulfilling the indicator for the first period and nearly two thirds of the households (65 percent) doing so for the latter period. By contrast, the smallest difference was found in Gaane in Ghana, with 17 percent.

In general, the spatial concentration of long-term growth dynamics is quite striking – underscored by the fact that five of these villages were located in Zambia and three in Kenya. No villages were found in Mozambique, and only one in Malawi.

Surprisingly, given the multi-stage purposive sampling of dynamic and less dynamic regions when the study started in 2002, nearly half of the villages are located in less dynamic regions. In the case of Tanzania, long-term growth occurred in two villages located in the less dynamic Morogoro region (Iringa being the more dynamic region). Data on cash incomes (controlled for household size and demography) and on food security improvements, presented in other APRA syntheses (Andersson Djurfeldt 2016a, 2016b) as well as a forthcoming chapter on assets (Andersson Djurfeldt 2018, forthcoming), points to a levelling of regional disparities in Tanzania and Zambia but growing spatial differentiation in Kenya with respect to key poverty indicators – tendencies which are also confirmed by the data above.

In terms of general livelihood improvements (as measured through the cross-sectional data on the shares of households that were able to save at each point of data collection), there was no clear pattern with respect to time: some villages saw climbing savings ability in the first period, others in the second.

Table 2.1 Villages of long-term inclusive growth – shares of panel households fulfilling the long-term growth indicator for the first and second panel waves by village, with ability to save among the village cross sections for 2002 and 2013

Share of households fullfilling criterea for long term								Savings in cross sections			
Country	Region	Region Type	Village	2002-2008	2008-2013	Diff	Sig.	2002	2013	Diff 2002-2013	sig.
Ghana	Eastern	Dynamic	Gyedi	0.25	0.47	0.23	*	0.57	0.87	0.30	***
	Upper Eastern	Less Dynamic	Gaane	0.04	0.21	0.17	**	0.33	0.52	0.19	*
Kenya	Nyeri	Dynamic	Gatondo/The	0.08	0.40	0.32	**	0.30	0.73	0.43	***
	Nyeri	Dynamic	Icuga/Gathun	0.07	0.32	0.25	*	0.37	0.83	0.46	***
	Nyeri	Dynamic	Kiambii	0.00	0.23	0.23	**	0.17	0.60	0.43	***
Malawi	Ntchisi	Less Dynamic	Cholamakand	0.21	0.53	0.32	**	0.38	0.66	0.28	**
Tanzania	Morogoro	Less Dynamic	Katurukila	0.04	0.29	0.24	**	0.33	0.71	0.38	***
	Morogoro	Less Dynamic	Kitelewasi	0.21	0.53	0.32	**	0.53	0.77	0.24	*
Zambia	Mazabuka	Dynamic	Nikantaka	0.02	0.52	0.50	***	0.09	0.90	0.81	***
	Mkushi	Less Dynamic	Mkewzi	0.00	0.65	0.65	***	0.06	0.95	0.89	***
	Mazabuka	Dynamic	Dumba	0.16	0.50	0.34	***	0.40	0.85	0.45	***
	Mazabuka	Dynamic	Oliver	0.24	0.43	0.19	*	0.60	0.81	0.21	*
	Mkushi	Less Dynamic	Chilekwa	0.05	0.37	0.32	***	0.07	0.66	0.59	***

2.1.2 Short-term growth patterns

Selection of villages where short-term growth occurred during the second panel wave similarly used data on agricultural commercialisation, specialisation and savings. The combinatorics are essentially the same except that the indicator is modified to consider households that improved their ability to save, i.e. they were unable to save in 2008 but had started to save by 2013.

In this context, both the long- and short-term indicators use the ability to save as a starting point. For the long-term growth indicator, villages that have achieved a sustained ability to save in combination with increased agricultural commercialisation or agricultural specialisation during the full period (2002–2013) were selected, provided that the village cross sections also showed increases in saving ability during this time. The short-term growth indicator was based on households that had started to save since 2008 and (a) had also increased their net agricultural commercialisation (entering more markets than they exited or increasing the volumes sold of the three grain crops) while raising more than 50 percent of their income from agriculture in 2013; or (b) who were specialised in agriculture throughout the period (i.e. they earned no cash income from non-farm sources). To address the aspect of inclusivity, villages were selected where there were positive and statistically significant changes in savings ability in the village cross sections for 2008 and 2013.

Table 2.2 Villages with short-term growth (2008–2013) – villages containing panel households fulfilling criteria for short-term growth where there were also positive changes in savings ability in village cross sections for 2008 and 2013

Share term growth indicator								
Country	Region	Region Type	Village		2008	2013	Diff 2002-2013	sig
Ghana	Eastern	Dynamic	Gyedi	0.25	0.70	0.87	0.17	*
Kenya	Nyeri	Dynamic	Icuga/Gathun	0.46	0.43	0.83	0.40	***
	Nyeri	Dynamic	Irigithathi	0.31	0.30	0.63	0.33	**
Tanzania	Morogoro	Less Dynamic	Idete	0.23	0.38	0.61	0.23	*
	Morogoro	Less Dynamic	Katurukila	0.20	0.35	0.71	0.36	***
	Iringa	Dynamic	Njage	0.35	0.36	0.59	0.23	*
	Iringa	Dynamic	Kasanda	0.25	0.38	0.67	0 .29	**
Zambia	Mkushi	Less Dynamic	Mkwezi	0.21	0.77	0.95	0.18	**
	Mazabuka	Dynamic	Dumba	0.37	0.57	0.85	0.28	**
	Mazabuka	Dynamic	Oliver	0.32	0.58	0.81	0.23	**
Mozambique	North	Less Dynamic	Nacocolo	0.21	0.42	0.69	0.27	*
	South	Less Dynamic	Mukotwene	0.09	0.14	0.34	0.20	*

Slightly fewer (12 compared with 14) villages contain dynamics of short-term, pro-poor agricultural growth. More recent patterns of growth therefore appear to be as spatially concentrated as longer-term trends of growth. This is accentuated by two aspects: on the one hand, the concentration of patterns to particular countries, in this case Tanzania and to a lesser extent Zambia; and on the other, the considerable overlap between sites of recent and more long-term growth.

In the case of Zambia, the three villages that have experienced recent pro-poor growth are also places characterised by long-term growth dynamics. Similarly, Gyedi in Ghana and Icuga/Gathumbi in Kenya also fit this description, as does Katurukila in Tanzania. Altogether, therefore, half of the sites showing recent growth are also villages of long-term growth, suggesting that growth has been sustained in these places but also that households which were unable to save during the first period (2002–2008) were part of the growth that occurred in these sites during the course of the final panel wave. In this sense, growth in the latter period also seems to have encompassed the poorest households of the villages in question between 2008 and 2013. This interpretation is strengthened by the cross-sectional data of savings in the villages for 2013, which show near universal ability to save in the three Zambian villages, Gyedi and Icuga/Gathumbi and high, albeit slightly lower, ability to save in the case of Katurukila. In turn, this points to the spatial concentration of both long- and short-term growth dynamics to particular places, where whole villages appear to be involved in pro-poor agricultural growth leading to a broad improvement of livelihoods among their inhabitants.

3. VILLAGE GROWTH TYPOLOGIES

The empirics of growth patterns suggest not only geographical differences in types of growth, but also propose a reconstruction and broadening of the original village typologies based on the various dynamics of growth.

3.1 Income-generation patterns by village type

To shed light on the sources of growth, I turn now to the data on cash incomes for the particular villages. This is available by household for 2008 and 2013.

Table 3.1 Village typologies based on growth dynamics

Short and Long Term	Country	Long term only	Country	Short term only	Country
Gyedi	Ghana	Gaane	Ghana	Irigithathi	Kenya
Icuga/Gathumbi	Kenya	Gatondo/Thegenge	Kenya	Nacocolo	Mozambique
Katurukila	Tanzania	Kiambii	Kenya	Mukotwene	Mozambique
Dumba	Zambia	Cholamakanda	Malawi	Kasanda	Tanzania
Mkwezi	Zambia	Kitelewasi	Tanzania	Idete	Tanzania
Oliver	Zambia	Chilekwa	Zambia	Njage	Tanzania
		Nikantaka	Zambia		

A few conclusions can be made on the basis of Table 3.1. Firstly, a total of 19 villages fulfilled the criteria of growth in either the more recent or the longer period, or both. Given that the sample as a whole contained 55 villages, this means that roughly a third of the sites registered agriculturally based improvements during the course of the study. As suggested by the overarching tendencies in the data for maize consumption presented in another APRA synthesis (Andersson Djurfeldt 2017a), only slight improvements were noted for the sample as a whole, which in turn suggests that such advances were being carried disproportionately by these villages. This interpretation is further supported by a second point, namely the concentration of growth sites in Zambia and Tanzania, and to a lesser extent Kenya. In the case of Zambia, six of the nine locations in the sample qualified for the growth criteria outlined above. In total, therefore, nearly a third of the 19 villages in Table 3.1 were found in Zambia. This is followed by Tanzania where five villages were classified according to one of the three typologies. Hence more than half of the growth villages were found in either Zambia or Tanzania.

Since the unit of study is the village (with trends among the panel households having been used to select the villages in question using the indicators of short- and long-term growth respectively), I will use the cross-sectional data for the various income streams to trace changes over time to unravel the growth dynamics for specific villages. The village typology presented in Table 3.1 is used as a starting point to classify the villages in an attempt to identify any unifying features.

The quantitative data on cash incomes contains information on a total of 12 income sources, with half of these being farm-based income categories: sale of food staples, sale of other food crops, sale of cash crops, sale of animals and animal produce, leasing out machinery and farm labour. Given the focus on pro-poor agricultural growth and agrarian-based commercialisation processes, non-farm incomes will not be discussed. Since the purpose is to shed light on the *relative* importance of particular sources of farm incomes and how these change over time, I calculate the share of a particular income source as a share

of total farm income for the village cross sections for 2008 and 2013 respectively. The absolute change in incomes is implicitly dealt with through using the indicators for long- and short-term growth, since only villages where incomes have been rising (as expressed through increases in ability to save) have been selected. Moreover, changes in actual cash incomes have been discussed in another APRA synthesis (Andersson Djurfeldt 2017b).

Since cash income data is only available for 2008 and 2013, it is only possible to say something about changes during the final period in terms of shifts in commercial opportunities that have accompanied growth dynamics. The analysis will also draw on qualitative work carried out in a handful of the villages: three of the Zambian villages (Mkwezi, Chilekwa and Nikantaka) have been studied in some detail and have also been the subjects of another publication (Andersson Djurfeldt and Hillbom 2016). Fieldwork has also been carried out in Gaane and Gyedi in Ghana (Andersson Djurfeldt, Djurfeldt et al. 2014), in Cholamakanda in Malawi (Andersson Djurfeldt, Mulwafu et al. 2017, submitted), and in Gatondo (Kenya). Out of the 19 villages, therefore, qualitative data has been collected in seven.

3.2 Villages showing both long-and short-term growth

Patterns of income generation vary among the villages in this category with the differences also becoming wider over time. In two of the Zambian villages, as well as Katurukila in Tanzania, incomes are dominated by sales of staple crops, whereas in Gyedi other food crops provide the lion's share of income. More diversified patterns exists in Icuga where cash crops in combination with animal products constitute the mainstay of incomes, complemented by other food crops, and in Oliver where households on average raise 40 percent of farm income from staple sales, supplemented by more or less equal shares from all other farm income sources except leasing out equipment.

Over time, the share of income raised from staple crops has grown in importance in two of the Zambian villages (Mkwezi and Dumba) at the expense of other food crops, as well as cash crops in the case of Dumba specifically. A reverse shift has occurred in Gyedi, however, with a stronger specialisation towards other food crops. In general, livelihoods in these villages have become more concentrated towards particular crop types over time.

Table 3.2 Changes in agricultural income composition in villages showing both long- and short-term growth – shares of income earned from particular sources in village cross sections for 2008 and 2013

		Staples				Cash food crops				Animal produce				Machinery		Agricultural labour			
Country	Village	2008	2013	Diff	Sig	2008	2013	Diff	Sig	2008	2013	Diff	Sig	2008	2013	2008	2013	Diff	Sig
Ghana	Gyedi	0.46	0.17	-0.29	***	0.05	0.11			0.06	0.04			0.00	0.00	0.00	0.00		
Kenya	Icuga/ Gathum	0.04	0.04			0.41	0.45			0.32	0.29			0.00	0.00	0.06	0.08		
Tanzania	Katurukila	0.66	0.63			0.10	0.18			0.07	0.07			0.00	0.00	0.07	0.09		
Zambia	Mkwezi	0.42	0.60	0.18	**	0.01	0.00			0.15	0.09			0.01	0.02	0.04	0.05		
	Dumba	0.24	0.84	0.60	***	0.37	0.04	-0.33	***	0.18	0.05	-0.13	**	0.00	0.01	0.05	0.07		
	Oliver	0.28	0.40			0.31	0.14	-0.16	**	0.03	0.17	0.15	***	0.00	0.00	0.00	0.13	-0.13	***

In Oliver, movement out of other food crops has been compensated for through rising incomes from animal produce as well as agricultural labour, while the income-generation patterns in Icuga have been static.

3.3 Villages with short-term growth only

In general, the sites of short-term growth have more diversified incomes than those villages that exhibit characteristics of both short- and long-term growth. With the exception of Chilekwa, which has seen a

specialisation towards staple crops over time, livelihoods in these villages are more evenly balanced between a combination of staple crops, other food crops, and/or cash crops or animal produce, depending on regional production patterns.

Movement out of animal produce has occurred in three villages, with this being compensated for with income from staple sales and other food crops in the case of Gaane. Improvements in livelihoods are driven by different sources of agricultural incomes, but staple crops generally have a smaller role in explaining patterns of growth in these villages than for villages in the first

Table 3.3 Changes in agricultural income composition in villages showing short-term growth – shares of income earned from particular sources in village cross sections for 2008 and 2013

		Staples				Other food crops				Cash crops		Animal Produce				Machinery		Agricultural labour			
Country	Village	2008	2013	Diff	Sig	2008	2013	Diff	Sig	2008	2013	2008	2013	Diff	Sig	2008	2013	2008	2013	Diff	Sig
Ghana	Gaane	0.24	0.39	0.14	*	0.16	0.31	0.15	***	0.00	0.01	0.52	0.23	-0.29	***	0.01	0.00	0.06	0.05		
Kenya	Gatondo/Thegenge	0.03	0.05			0.25	0.18			0.38	0.47	0.26	0.09	-0.17	**	0.00	0.01	0.07	0.20		
	Kiambii	0.02	0.17	0.15	***	0.22	0.19			0.38	0.37	0.31	0.28			0.00	0.00	0.07	0.00		
Malawi	Cholamakanda	0.09	0.12			0.39	0.46			0.37	0.28	0.05	0.08			0.03	0.01	0.07	0.05		
Tanzania	Kitelewasi	0.32	0.39			0.38	0.37			0.09	0.05	0.13	0.15			0.01	001	0.07	0.03		
Zambia	Nikantaka	0.23	0.25			0.13	0.20			0.19	0.11	0.25	0.31			0.06	0.04	0.14	0.09		
	Chilekwa	0.29	0.73	0.44	***	0.24	0.22			0.05	0.03	0.14	0.01	-0.13	***	0.02	0.00	0.25	0.00	-0.25	***

category. Commercial prospects for other food crops and cash crops have stronger effects on livelihoods in these villages. The share of income raised from animal produce, meanwhile, has been dwindling in three of the villages.

3.4   Villages with long-term growth only

For the villages with long-term growth, income-generation patterns are generally stable over time – there were few significant differences with respect to the different income sources.

No clear pattern of diversification or specialisation emerges – two villages in Tanzania are clearly specialised in staple crops, Irigithathi has income-generation patterns similar to those in the other Kenyan growth villages, but with a larger role awarded to staples (see Table 3.4).

The role of agricultural labour for all three village types is generally small, and here Mukotwene deserves mention: nearly half of farm income is generated through agricultural labour in this village. Unlike the other villages, moreover, leasing out agricultural equipment constitutes a more sizeable (if minor) share of agricultural income than in the other villages.

Table 3.4 Changes in agricultural income composition in villages showing long-term growth – shares of income earned from particular sources in village cross sections for 2008 and 2013

		Staples				Other food crops				Cash crops				Animal Produce		Machinery		Labour	
Country	Village	2008	2013	Diff	Sig	2008	2013	Diff	Sig	2008	2013	Diff	Sig	2008	2013	2008	2013	2008	2013
Kenya	Irigithathi	0.03	0.24	0.20	***	0.48	0.30	-0.19	*	0.14	0.01	-0.13	***	0.31	0.39	0.00	0.00	0.04	0.07
Tanzania	Idete	0.80	0.81			0.08	0.07			0.03	0.01			0.02	0.07	0.02	0.00	0.05	0.04
	Njage	0.72	0.76			0.16	0.13			0.03	0.05			0.09	0.02	0.00	0.01	0.01	0.03
	Kasanga	0.35	0.19			0.20	0.24			0.12	0.23			0.11	0.13	0.03	0.03	0.19	0.18
Mozambique	Nacocolo	0.42	0.23			0.25	0.25			0.12	0.37	0.25	**	0.11	0.09	0.00	0.00	0.10	0.06
	Mukotwene	0.08	0.06			0.09	0.04			0.00	0.00			0.27	0.30	0.11	0.13	0.45	0.48

Summing up the results so far suggests no clear patterns in terms of particular commercialisation pathways being tied to specific types of growth; rather, income composition appears to shift in response to particular commercial opportunities as they arise and also varies geographically in relation to local production patterns. Instead of speaking of particular village typologies, it may therefore be fruitful to distinguish between the various types of commercialisation trajectories identified in the data above.

4. COMMERCIALISATION PATHWAYS

Three broad types of commercialisation can be identified in the growth villages: (1) Specialisation in staple crops with minor importance attached to other sources of agricultural income; (2) Specialisation in other food crops; and (3) Broadly diversified livelihoods, combining various sources of agricultural production, with no one source exceeding half of the total income generated from agriculture. Common to all of these is the very minor importance of leasing out agricultural equipment (indeed, in most villages this income source does not contribute to total farm income at all), and the relatively small share of income raised from agricultural labour. While the latter is of local importance (with two villages generating a fifth or more of farm-based cash on this basis), in general the share of income earned from this source is well below 10 percent in most villages.

Table 4.1 Commercialisation pathways by village

Country	Specialisation staples	Country	Specialisation, other food crops	country	Diversification
Tanzania	Idete	Ghana	Gyedi	Ghana	Gaane
	Njage			Kenya	Gatondo/ Thegenge
	Katurukila				Icuga/Gathumbi
Zambia	Chilekwa				Irigithathi
	Dumba			Malawi	Cholamakanda
	Mkwezi			Tanzania	Kasanga
					Kitelewasi
				Zambia	Nikantaka
					Oliver
				Mozambique	Nacocolo
					Mukotwene

As demonstrated in Table 4.1, diversification outnumbers the other two types of commercialisation quite considerably, while diversification is also found in a much broader set of village settings. Specialisation in staple crops, by contrast, is concentrated in six villages in two countries, Tanzania and Zambia, while specialisation in other food crops is found only in one village, Gyedi in Ghana.

In what follows, the different commercialisation pathways will be analysed in relation to market-related factors in an aim to identify explanations and drivers of particular types of commercialisation. The first attempt to do this emanates from the quantitative data where the aim is to identify explanations that can be generalised in terms of, for instance, institutional mechanisms tied to prices and marketing arrangements. A major caveat with respect to data availability is, however, the much more comprehensive data that exists for the three grain crops – maize, rice and sorghum – compared with data on other food crops and cash crops. Hence, the possibilities of analysing staple crop specialisation on the basis of the quantitative data are much better than the other commercialisation pathways.

A second source of data is the qualitative data which exist for seven of the villages in question – unfortunately here the data is richer for some villages than for others, but the data can nonetheless shed light on patterns that may be visible but inexplicable through the quantitative data alone, especially for the villages where diversification pathways dominate. A major shortcoming of this data (apart from its patchiness), is that the most recent phase of qualitative data collection was in late 2012, when data were collected in three Zambian villages that all have followed the staple

crop specialisation pathway and one village in Malawi (Cholamakanda). The two villages in Ghana were visited in late 2011 and the Kenyan villages as early as 2006. Again, therefore, a more profound analysis is possible to construct of staple-based growth, despite the concentration of this type of commercialisation to relatively few sites.

4.1 Villages engaged in staple crop specialisation

A first point of departure is to identify the type of staple crops being grown in the villages. The production trends of the particular grains, changes in technology, use over time, and marketing strategies as well as price perceptions, can then be used to trace the sources of increased commercialisation. Here the cross-sectional

data will be used since the interest is in dynamics involving the villages as a whole, rather than just the panel households.

Whereas the cash income data use the classification 'staple crops', in practice there is a strong connection with the data on grain commercialisation. The amalgamation of data on the sale of all staple crops, however, creates an impression of specialisation in one particular crop. In the case of some villages – perhaps especially the Tanzanian villages – this is spurious, since checking the income data against production data shows that households in these villages in fact produce both rice and maize, and in this sense are diversified within the sub-sector of staple crops. A similar pattern can be observed for maize and cassava in the case of Mkwezi and Chilekwa as suggested by the patterns found in Table 4.2.

Table 4.2 Share of households producing staple crops in villages specialising in staple crops for 2002, 2008 and 2013

2002						2008				2013			
Country	Village	Maize	Cassava	Sorghum	Rice	Maize	Cassava	Sorghum	Rice	Maize	Cassava	Sorghum	Rice
Tanzania	Idete	0.62	0.37	0.00	0.97	0.85	0.28	0.00	0.92	0.87	0.37	0.00	0.95
	Katurukila	0.87	0.31	0.00	0.95	0.84	0.09	0.00	1.00	0.79	0.10	0.00	0.98
	Njage	0.85	0.63	0.00	0.95	0.67	0.21	0.00	0.97	0.69	0.51	0.00	1.00
Zambia	Mkwezi	0.91	0.89	0.35	0.00	0.98	0.63	0.02	0.00	0.98	0.72	0.05	0.00
	Dumba	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
	Chilekwa	0.85	0.88	0.63	0.07	0.92	0.12	0.06	0.00	1.00	0.65	0.00	0.00

In general, cropping patterns have remained relatively stable for all the villages and most crops: in Idete there was a movement into maize in the first period, with a rise in the share of maize growers by 23 percent (significant at the 5 percent level). A smaller increase (8 percent) in maize cultivators can also be noted for Chilekwa in the second period (also significant at the 5 percent level). A major shift has occurred with respect to cassava cultivation, however, with households moving out of cassava in four of the villages between 2002 and 2008. This drop in share of households growing cassava was most pronounced in Chilekwa where more than three quarters (76 percent) of the sample ceased cultivation (significant at the 0.1 percent level). However, this tumble was partially compensated for through a rebound in the second period of 53 percent (also significant at the 0.1 percent level). A similar pattern can be noted for Njage, where 42 percent of the households stopped cassava production in the first period and 30 percent started cultivation in the second period (both differences statistically significant at the 0.1 percent level). In Katurukila and Mkwezi, meanwhile, the drop in cassava production of around 25 percent

(significant at the 0.1 percent level) between 2002 and 2008 was not followed by a resurgence in the second. The share of households cultivating sorghum also fell in the two Zambian villages that grew this crop in 2002, but again there was a permanent withdrawal from sorghum production with no recovery between 2008 and 2013.

Hence, by 2013 staple crop patterns were characterised by maize being grown almost universally in the Zambian villages, and in two of these also being complemented by cassava. In the Tanzanian villages rice held the position of primacy, being supplemented by maize and to a lesser extent cassava.

Longitudinal data are available only on the grain crops and, as such, the commercialisation and production trends in cassava are difficult to assess over time. Sorghum is grown by very few households, with the amount shrinking over time. The discussion will therefore centre on maize and rice and seek to trace the sources of commercialisation viz. particular marketing factors.

4.1.1 Maize

Maize is grown widely across the villages (by 90 percent of the households in the villages as a whole) and has also been the subject of government interventions aiming to stimulate production in both Zambia and Tanzania since the early 2000s (Chirwa and Dorward 2013).

As can be observed in Table 4.3, maize production grew considerably in the first period, especially in the Zambian villages, and continued to do so in Mkwezi in the second period.[2] Production was much lower in the Tanzanian villages and also more stable, with the exception of minor increases in production in Idete.

Table 4.3 Mean and median maize production per household, three-year averages for the two years preceding the survey and the year of survey, by village

Mean									Median				
Country	Village	2000-2002	2006-2008	2011-2013	Diff 2000-2008	sig	Diff 2006-2013	sig	2000-2002	2006-2008	2011-2013	Diff 2000-2008	Diff 2006-2013
Tanzania	Idete	365	612	929	217 *	*	316	*	378	510	887	132	377
	Katurukila	446	499	709					420	333	488	-87	154
	Njage	387	552	656					282	399	456	117	57
Zambia	Mkwezi	476	1437	2367	960	***	930	**	400	933	2000	533	1067
	Dumba	1146	2904	3225	1758	***			750	1517	2583	767	1067
	Chilekwa	967	1701	2474	734	*			667	967	1500	300	533

In the case of the Zambian villages, therefore, the generation of a surplus for sale appears to be a factor that can explain the increased share of income being raised from the sale of maize specifically, at least for the first period. The extent to which production increases in these villages are the result of improved price incentives and marketing infrastructure can be at least impressionistically surmised from some of the quantitative data.

The dataset contains longitudinal information on three marketing aspects: marketing channels, price volatility and perceptions of prices. While production may have been prompted by improvements in all of these in the first period, rising and stable prices and lower transportation costs to reach markets may explain widespread improvements in livelihoods in the latter.

With respect to marketing channels, a clear pattern is evident in the data: for all the Tanzanian villages the marketing of maize passes through village traders, with between 93 percent and 100 percent of the farmers using this channel, with slight village variations. Moreover, while the variables are not entirely comparable over time, the Tanzanian villages have relied on within-village marketing throughout the period – there appear to have been no changes in terms of marketing structure. Furthermore, the number of commercialised households has been largely stable showing small differences over time.

The Zambian villages show a marked contrast, and here the entry of the state, and subsequent domination of maize marketing, is remarkably visible in the data: in 2002 one household reported selling maize through the state marketing board, while in 2013 around 90 percent of the households in the three villages listed the state marketing board as their main market outlet. In the meantime, the relatively wide variety of marketing channels used by farmers in 2008 has narrowed considerably, while the number of households that have entered the maize market since then has risen from 41 to 50 in Mkwezi and increased even more conspicuously in the other two villages, rising from 24 to 41 and 42 respectively. In turn, this suggests that the presence of the state marketing board has not only encouraged commercialisation, but also constitutes a very real change in village realities.

Price volatility, both between seasons as well as inter-annually, is commonly considered a scourge of African output markets. Data collected on the highest and lowest price received by the farmer can be used to gauge volatility in prices over time. The dataset does not contain information on amounts sold at particular prices and therefore does not permit tracing producer prices over time per se. Moreover, comparing prices over time and across countries is tricky given differences in exchange rates and purchasing power parity. Nonetheless, if the relative price difference between the highest and lowest price has decreased over time, this may indicate growing price stability and more predictable price conditions at least inter-seasonally.

Somewhat surprisingly, the relationship between the lowest and highest price received by the farmers has

remained largely stable for the sample as a whole, when considering the entire research period: the lowest price constituted on average 76 percent of the highest in 2002 and 77 percent in 2013. This share has on the whole also been higher for the Zambian villages when compared with the Tanzanian ones. In 2008, this was particularly striking when the share ranged from 96 percent to 99 percent in the Zambian villages, compared with a price share of around 60 percent in the villages in Tanzania. Perturbingly, price volatility seems to have increased rather since then in the case of Mkwezi, where by 2013 the lowest price constituted only 49 percent of the highest price on average for the households that marketed maize. This is all the more surprising given the fixed prices offered by the Grain Marketing Board. Qualitative data from this village suggests that market segmentation in Zambian villages may be related to the use of the price mechanisms by enterprising cooperatives that assemble maize in the villages in the low season to resell it to the Grain Marketing Board later in the season. According to the data, this tendency was even more pronounced in the case of Chilekwa, and it is therefore surprising that this is not reflected in the price data. Overall, however, the smoothening of output prices does not appear to be a factor that in itself has encouraged increases in commercialisation between 2008 and 2013.

While actual prices are characterised by volatility, the *price perceptions* of farmers may be more important in shifting production to take advantage of commercial opportunities. Farmers were asked to retrospectively reflect on the prices since the previous rounds of data collection in both 2008 and 2013.

In general, farmers express a great deal of optimism regarding maize prices. For the first period, the share of sellers stating that prices had improved since 2002

ranged from 75 percent in Mkwezi to all farmers in Dumba, with the other villages registering shares between these values. Sample sizes are small, however, and results for the first period can easily be misinterpreted for this reason. In the second period, the number of commercialised farmers was much higher, especially in the Zambian villages. For these villages, none of the respondents stated that prices were lower than in 2008, but lower shares stated that prices had improved, with all households in Chilekwa, for instance, replying that prices were unchanged. In the Tanzanian villages, around half the sampled farmers in Njage perceived that prices were higher than in 2008, compared with just over 70 percent in the other two villages. On the whole, price incentives for maize were more brightly viewed in the first period than in the second, suggesting that prices were stabilising during the second period.

In general, production increases during the first period (2002–2008) seem to have been prompted by rising (and in the case of Zambia also stabilising) prices. Price incentives also appear to have been important in the second period in encouraging market entry in the Zambian villages. An even more significant impetus of commercialisation, however has been the improvement of marketing channels through the establishment of state marketing boards in the villages in question.

4.1.2   Rice

In terms of production volumes, rice is clearly the more important grain crop in the Tanzanian villages. Spurts in production have predominantly occurred in the second period, especially in Idete and Katarukila. The former village also experienced a rise in maize production between 2008 and 2013.

Table 4.4 Mean and median production of rice (paddy) three-year averages, by household for 2000–2013 in Tanzania

								Median				
Village	2000-2002	2006-2008	2011-2013	Diff 2000-2008	sig	Diff 2006-2013	sig	2000-2002	2006-2008	2011-2013	Diff 2000-2008	Diff 2006-2013
Idete	1267	1127	3186	-140		2059	***	882	840	2693	-42	1853
Katurukila	1599	1708	2422	109		714	*	1503	1400	2080	-103	681
Njage	1489	3066	3251	1576	***	186		1274	2728	2304	1454	-424

Median production has also increased considerably in these two villages, whereas Njage saw a jump in mean production in the first period, and a contraction in median production in the second.

As with maize, available surpluses for sale have risen considerably over the period as a whole, and the share of commercialised households has also increased since 2002. By 2013, nearly all the households (94 percent and 93 percent respectively) that cultivated rice in Idete and Katurukila sold their crop compared with 74 percent and 86 percent in 2002. In Kiberege, however, the share of commercialised farmers was stable at around 70 percent.

In 2002, nearly all households marketed rice through private traders – indeed only six out of 90 farmers did not do so. More specific questions on marketing channels were added in 2008, and at this point, the majority of farmers answered that they marketed their rice at the farm gate. For Idete and Katurukila, this was supplemented by marketing in the local village market. Only in Njage did households respond that they sold maize outside the village, with 34 percent of the farmers stating that external markets was their dominant marketing channel. In 2013, traders from within the village still constituted the most important marketing outlet for the majority of farmers – more than three quarters of the farmers in all villages stated that this was their main market channel. By the time of the final round of data collection, brokers and briefcase traders had also emerged, comprising the main market outlet for the remainder of the households. To some extent, therefore, it seems that more actors have appeared in local rice markets, although the data from 2002 and 2008 does not clearly state to whom farmers sold their rice.

Price volatility when measured as the quota between the lowest and highest prices received was higher at the end of the survey periods than at the beginning, but also converged between the villages, such that the share of lowest to highest price received was 65 percent for two villages, and 66 percent for the third. The difference between the highest and lowest price was thus larger for rice than for maize, which may be the result of state-controlled maize prices in the case of Zambia. Hence, increases in production and market entry do not appear to have been affected by rising volatility of prices.

In general, the perceptions of rice prices were somewhat bleaker than the view of maize prices in the first period, although a clear majority of farmers held a favourable impression of trends in output prices, ranging from 76 percent to 78 percent in the three villages. Again, however, the number of missing cases is relatively high for the data collected in 2008. The positive view of prices is reflected only in the production data for Njage, which registered a large jump in production in the first period.

The price data for 2013 is more robust but suggests that perceptions of prices vary a great deal between the villages: in Katurukila, 82 percent of the sample stated that prices had risen since 2008 and another 8 percent that they were unchanged. In Njage, by contrast a quarter of the households claimed that prices had fallen and another 11 percent that they were constant. Also, Njage was the only village where production did not rise significantly during this period.

Summing up the data on villages that specialised in grain crops suggests that perceptions of prices for both maize and rice were very positive for the first period (2002–2008), but had stabilised by the time of the second period, with fewer households stating that prices had risen since 2008. For both maize and rice, the number of commercialised households has increased quite dramatically since 2002, with nearly all growers of both maize and rice being commercialised by 2013. Rising production volumes in combination with increased prices appear to explain the increasing specialisation of farm incomes towards staple crops, especially between 2008 and 2013. Inter-seasonal price volatility has been more or less unchanged for both crops and as such does not seem to explain increasing commercialisation. In the case of maize, the re-entry of the state as a major procurer of maize between 2008 and 2013 has fundamentally changed the marketing structure for this crop, to a large degree explaining growing market participation.

4.2   Villages engaged in other food crop specialisation

Only one village was involved in specialisation outside grains, Gyedi in the Eastern Region, Ghana. As noted earlier, the available quantitative data is sparse for production as well as commercialisation of the non-grain staple crops. Moreover, the number of crops covered by the data has increased during the study period meaning that data are not strictly comparable over time. Data on yams, cocoyams and fruits were collected starting only in 2008, which is likely to explain the drop in production of other food crops between 2002 and 2008. Over time the production of plantains has grown, with nearly all households cultivating this crop in 2013.

Table 4.5 Production and commercialisation in other food crops, share of households in village cross sections growing and share of growers selling, Gyedi

Crops Grown								Crops Sold						
	2002	2008	2013	Diff 2002-2008	Sig	Diff 2008-2013	sig	2002	2008	2013	Diff 2002-2008	Sig	Diff 2008-2013 sig.	Sig
Plantains	0.24	0.89	0.95	0.65	***			0.47	0.88	1.00	0.41	**	0.12	**
Beans	0.26	0.16	0.03			-0.13 **	**	0.63	0.58	1.00			0.42	**
Peas			0.02							1.00				
Sweet Potatoes	0.05	0.03						1.00	1.00					
Ground Nuts	0.21	0.07	0.02	-0.14	*			0.69	0.60	1.00				
Vegetables	0.73	0.83	0.88					0.84	0.92	0.92				
Other food crops	0.43	0.01		-0.42	***			0.72	0.00					
Yams		0.59	0.49						0.56	0.72				
Coco Yams		0.89	0.93						0.96	0.96				
Fruits		0.07	0.05						0.60	1.00				

The number of cases is very small for the market participation data. Only one clear pattern can be established – and again this relates to plantains where market participation increased in both periods. In 2013, households were asked to rank the crops they sold in terms of importance as sources of income. Despite increasing market involvement in plantains, 83 percent of the households that sold vegetables stated that vegetables were the most important source of cash income among the other food crops sold by the household. Just over half (54 percent) of the households that sold plantains ranked the crop as the second largest source of cash income.

In total, 39 farmers (out of a total of 60 in the village sample as a whole) stated that sale of vegetables was the most important source of cash income among the food crops that the household sold. In turn, 92 percent of these argued that the prices for vegetables had improved since 2008. The data from 2013 confirms the impression from the qualitative interviews carried out in Gyedi in late 2011, where trade in tomatoes especially was booming. Gyedi is by all accounts a remarkable village – it is run as a religious community stressing agricultural prowess, thrift and unity. The local pastor in cooperation with the local extension services has devised strategies for avoiding market gluts, such as off-season irrigation of tomatoes. The village is in fact a suburb of the Brong Ahafo district capital of Begoro, which is a centre for tomato production and trading in Ghana. While fields are located outside the village (and the town itself), the marketing possibilities are ideal (Andersson Djurfeldt, Djurfeldt et al. 2014) and the potential for similar specialisation is likely to be limited elsewhere.

4.3 Villages engaged in diversification

While villages involved in diversification constitute the largest number of growth villages, there are no clear unifying features of all of these villages, nor are there any apparent trends over time.

4.3.1 Cash crops-based diversification

Nonetheless, some sub-typologies can be proposed. Cash crops contribute a relatively large share of farm-based incomes in five villages – Nacocolo (37 percent) in Mozambique, Cholamakanda (28 percent) in Malawi and three villages in Kenya: Gatondo (47 percent), Kiambii (37 percent) and Icuga/Gathumbi (45 percent) – but are of limited importance in the other villages. Generally, one particular crop dominates cash crop production and has done so since 2002: in the case of Nacocolo it is nuts, where 67 percent of the households grew nuts in 2013; in the case of Cholamakanda it is tobacco, but here the share of households involved in production has decreased since 2002 when nearly 90 percent produced tobacco, to 56 percent in 2013; in the case of Gatondo it is tea, grown by 77 percent of the households; and in Icuga and Kiambii, 93 percent and 90 percent of the households respectively grew coffee in 2013.

Given the relatively large share of income from cash crops as a share of farm income and the concentration of cropping patterns to particular crops, shifting commercial opportunities in specific crops are likely to affect livelihoods quite substantially. Three sets of questions gauge the marketing options available for cash crops: data on price perceptions, data on amounts sold, and data on contract-farming arrangements. Only data for the latter exist for all three points of data collection.

In Nacocolo, only nine households sold nuts in 2008, and all of these considered prices to have either remained stable or risen since 2002. By 2013, the number of households cultivating nuts had more than doubled to 23, and 57 percent stated that they sold larger quantities compared with 2008 and 49 percent that prices were higher than at that time, while 22 percent of the interviewees considered prices to be lower, and an equally large share suggested that they had remained unchanged. Hence, in this village both the number of farmers involved in production and sale had increased, while marketed volumes were also considered to be higher. A similar image emerges in part in the case of Cholamakanda in 2008: 96 percent of the farmers stated that prices were higher for tobacco than in the previous period, a share which is also repeated for the period between 2008 and 2013. Here the volume sold was reported to be smaller by 60 percent of the households, whereas a quarter of the farmers increased the quantity sold. While prices may not be discriminating against smaller farmers, it appears that households have either shifted out of tobacco to the benefit of other crops or lack labour to produce the desired amounts for the market. However, qualitative fieldwork from Cholamakanda indicated that soybeans (and to a lesser extent groundnuts) were becoming an attractive alternative to tobacco, lending credence to the former interpretation. In the case of Gatondo, by contrast tea prices were considered to have fallen between 2002 and 2008 – 73 percent of the farmers stated that the price was lower than in 2002. However, by 2013 this state had all but reversed: 91 percent of the farmers stated that the prices had risen since 2008, while 77 percent also stated that they were selling larger quantities of tea.

For coffee, the picture was diametrically different depending on the village in question: in Kiambii, around half of the sampled farmers stated that prices were higher than in 2002, and another 38 percent that they were stable. Only two households in Kiambii suggested that they were lower in 2008 than in 2002. By 2013, however, prices were considered to have dropped by nearly 90 percent of the farmers, while 70 percent

stated that they were selling less than during the previous survey round. Tendencies were remarkably dissimilar in Icuga: 59 percent of the households stated that prices rose between 2002 and 2008, but as many as 23 percent considered prices to have fallen already in the first period. By the final data collection round, 92 percent of the sampled households argued that prices had risen since 2008, while 46 percent also stated that they sold more coffee than at that time. The data on contract farming may shed some light on this: in 2008, 26 percent of the farmers in Kiambii stated that they sold coffee on contract, whereas this rose to 57 percent in 2013; by contrast none of the coffee farmers in Icuga were involved in contract farming in 2013, but as many as 68 percent were in 2008. In turn, this may suggest that farmers in Kiambii perceived themselves to be bound by unfavourable contracting arrangements. In general, contract farming is limited in the villages, with the exception of the Kenyan villages, but here the tendency has been for farmers to leave contracting. In Gatondo, for instance, all tea farmers stated that they grew tea on contract in 2008, but by 2013, none of the households were involved in contracting. Hence, Kiambii stands out in terms of contract engagement.

With the exception of coffee in Kiambii, cash crop-based diversification has been tied to rising prices for the dominant cash crop. At the same time, volumes sold have increased in all villages, except again for Kiambii and Cholamakanda, where despite rising prices farmers stated that lower volumes of tobacco were being marketed.

4.3.2   Villages with mixed livestock systems

Three villages have commercially diversified around livestock and livestock products: Irigithathi in Kenya, Nikantaka in Zambia and Mukotwene in Mozambique, where sale of animals and animal products constituted at least 30 percent of income based on agriculture in 2013. Income from this source is combined with other income sources, most uniquely with income from agricultural labour in the case of Mukotwene. The livestock data for Mukotwene unfortunately is incomplete, but for Irigithathi and Nikantaka, it is clear that these villages rely on cattle and dairy farming. Dairying appears to be more important in the Kenyan village, with 81 percent of the households stating that they sold animal products regularly, whereas the corresponding share sold animals in Nikantaka. Retrospective data on livestock commercialisation does not exist, nor has data been collected on marketing structures and price perceptions. Interestingly, 10 percent of the households in Irigithathi and as many as 24 percent in Nikantaka claimed to have received livestock through projects

run by NGOs, donors or governments, pointing to the importance of interventions outside the staple crop sector at the local level.

4.3.3   Other types of diversification

Having identified these two sub-types of diversification, the four remaining villages end up in a residual category of sorts: here sale of staple crops constitutes a large chunk of livelihoods, ranging from 35 percent to 40 percent, but this type of commercialisation is supplemented by the sale of other crops that in some cases outsize staple sales. Hence, commercialisation in staples does not have the dominant role in livelihoods found especially in the villages with specialised commercialisation in maize. Two observations are relevant though: in Gaane in Ghana and perhaps especially in Oliver in Zambia the tendency over time is towards specialisation in staple sales. By contrast, the two Tanzanian villages of Kasanga and Kitelewasi show a remarkable stability of diversification patterns over time.

Even if sub-groups of diversification patterns can be identified for these villages, growth revolves around the production and sale of a set of relatively high-value products: food crops, cash crops, animal produce in combination with staple sales, with households balancing the various income sources depending on commercial opportunities.

5. CONCLUSION

This paper started with the primary aim of establishing the occurrence of pro-poor agricultural growth, understood as a process of increased welfare and broad-based inclusion stimulated by agricultural commercialisation. While there are numerous examples of such growth villages in the study areas, the spatial concentration of growth dynamics to specific villages in particular countries is quite striking.

Indeed, out of the 19 villages classified as having experienced either long- or short-term growth, or both, six are located in Zambia and another five in Tanzania. Only one of these villages is found in Malawi. Moreover, in a handful of cases long- and short-term growth overlap, and in these villages a new wave of increasing commercialisation appears to have increased welfare among poorer households during the second data collection phase. Entire villages have in the process become embedded in (or driven) dynamic economic change.

However, there are no common patterns of commercialisation that have emerged in particular periods – a particular crop type or market has not been driving growth over the long and short run respectively. Rather, it is possible to identify three types of commercialisation pathways for the growth villages: staple-based specialisation, food crop-based specialisation and broad diversification. In the case of food crop-based specialisation, this is found in one village with uniquely advantageous characteristics, pointing to limited possibilities for generalisation.

Therefore, we can speak of two production types: grain-based specialisation and diversification. Within the latter type, diversification around cash crops and livestock respectively can be thought of as sub-groups. Diversified villages outnumber staple crop villages by far, with grain-based specialisation occurring in a third of the villages. Although data on price perceptions and marketing structures are available only for the grain crops and non-food cash crops – hence limiting comparison across all crop types – the data point very clearly to the importance of improved prices and marketing structures in encouraging production.

One general conclusion (aside from the more basic calls for contextualisation found in almost any village-level study) relates to the relevance of different strategies for different types of production systems. While much policy has focused on increasing productivity (and by implication production volumes) in grains, especially through a variety of grain subsidy schemes, much less focus has been paid to diversified farm systems. Such systems are on the one hand less vulnerable since farmers can shift in and out of the various commercial opportunities, and on the other require a different set of policy strategies than grain-based livelihoods.

A related point concerns the role of state support in creating marketing structures and guaranteeing producer prices. In the case of Zambia, the state has changed the marketing conditions for maize dramatically, especially since 2008. While this has no doubt raised production volumes and improved livelihoods, the question must still be raised whether this intervention has been able to make a decisive break with poverty patterns that can be sustained without state support.

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ENDNOTES

1   Nonetheless, income data have recently come under fire from researchers suggesting that assets are a more dependable way of measuring wealth over time, in the event pointing to the advantage of alternative metrics of growth (Meinzen-Dick et al. 2014).

2   The figure for Mkwezi does not match the one stated in Andersson Djurfeldt and Hillbom (2016); thorough checking of the data suggests that the one given in Table 4.3 is the correct figure.

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