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# **Outgrower Schemes and Sugar Value-Chains in Zambia: Rethinking Determinants of Rural Inclusion and Exclusion**

## **Abstract**

Integration of smallholders in outgrower schemes has been advanced as a strategy for poverty reduction in the global south, but how terms and conditions of inclusion and exclusion shape divergent outcomes, and processes underpinning these local dynamics remain an under-researched area. This study, set in Zambia's southern 'sugarbelt' region of Mazabuka, draws on two contrasting outgrower schemes to examine determinants of smallholder inclusion in sugar value-chains, and consider how various terms and conditions underpinning inclusion shape various interests, reactions and pathways for value capture among different local groups. Our study reveals terms and conditions are important in shaping divergent outcomes for smallholders included in sugar value-chains. It shows determinants of inclusion and exclusion are complex and go beyond market imperatives that are production related (structural) to include social-cultural dynamics (non-structural). The centrality of the paper points to lived realities and experiences for different groups and political reactions from below, underlining how socially contested intersection of global-local value-chain produces diverse but interdependent hierarchies of inclusion and exclusion. For an early stage in planning of outgrower schemes by state and non-state actors, recognition of the various social groups and their complex engagement and reactions to changes in land-use and land control will not only expose competing interests but should inform policies, institutions and investments to improve value-chain impacts. This paper hopes to contribute towards a more nuanced understanding of the complex engagement of smallholders in changes in land use and land control in developing countries in the era of land-grabbing.

**Key words:** adverse incorporation; commodity crop expansion; contract farming; outgrower schemes; value-chain inclusion; Zambia

## 1 Introduction

In the past two decades, the sugar industry has expanded rapidly in Southern Africa (Dubb et al. 2016; Richardson 2010; Hess et al. 2016). Buttressed by short-run access to the European Union's internal markets (Dubb et al. 2016; Richardson and Richardson-Ngwenya 2014), the industry has found its place in the contemporary development landscape as presenting opportunities for smallholder value-chain inclusion and prospects for rural development (Dubb et al. 2016; Richardson 2010; World Bank 2009). Dubbed 'big-sugar' on scale and political influence, investment in the industry have raised controversies around 'land-grabbing,' and the role of smallholder farmers (Richardson 2010; Smalley 2013; World Bank 2011). Yet, local interests and responses based on smallholder positioning within value-chains, political reactions to land-use and land control change remain peripheral to the contemporary land-grab debate (World Bank 2011; Braun and Meinzen-Dick 2009) except for recent efforts (Xu 2018).

Although sugarcane production in southern Africa has been described as both commercial and developmental, enclosures on land, water and other natural resources have ignited debate about the relative merits of LaSAIs, agribusiness concentration and coordination arrangements shaping smallholder participation in value-chains (World Bank 2008; Collier and Dercon 2014; Baglioni and Gibbon 2013). Critical agrarian studies have increasingly promoted contract farming and outgrower schemes as alternatives to outright land purchases and as inclusive business models in which local smallholder farmers can participate – stereotyped as 'win-win' arrangements (Cotula et al. 2009; Borras et al. 2011). They emphasise capital investments in different settings and their related logics, state policies and politics (Dubb et al. 2016), livelihoods and implications for labour and social differentiation (Manda et al. 2018a).

Previous studies have shown terms of outgrowing contracts are diverse, generating different pathways for the distribution of risks and gains which re-organises class relations in rural geographies (Oya 2013; Smalley 2013). For instance, outgrowers are generally smallholders using their own land and labour for production within a commercial relationship for output marketing and input supply but recent developments in southern Africa show smallholders can cede their land for a dividend as land owners – dubbed 'shareholder outgrowing' (Hall et al. 2017; Matenga and

Hichaambwa 2017). A different set of literature has focused on smallholder agency and their related forms of, and political dynamics of resistance, highlighting how struggles around land deals go beyond resistance and expulsion (Hall et al. 2015; Xu 2018). The argument is that 'political reactions from below', highlight how local people negotiate dynamics of inclusion and exclusion in value-chains and implications for prospects of local accumulation (Hall et al. 2015). With exceptions, little research and analysis is available on how activation of value-chains in different settings including terms and conditions for value-chain inclusion and/or exclusion shape diverse outcomes, and processes that underpin these dynamics in local communities. There is a gap in understanding interactions between processes and forms of inclusion in value-chains and commercial agriculture on the one hand and land and labour relations and dynamics in the local economies on the other (Hall et al. 2017).

The problem with existing agrarian political economy literature is that it misses essential contours and trajectories of political reactions from below. With rapidly changing agrarian contexts across sub-Saharan Africa (World Bank 2009; Collier and Dercon 2014; Wiggins et al. 2010), this literature misses important inclusionary and exclusionary dynamics and diverse factors that shape local outcomes. Some of these relate to an overly focus on local resistance against corporations or state, ignoring intra-or inter community conflicts/divergencies even among the poor themselves. The centrality of land and struggles of access by local people has tended to ignore other triggers of political reactions from below. Ignored also are struggles of smallholders included in value-chains, focusing instead on the struggles of the excluded. Yet, smallholders are not a homogenous category (Borras and Franco 2013; Hall et al. 2015). As Xu (2018) notes: "[t]hey have distinct resource endowments (e.g. land control, labour conditions, financial resources and social resources) and are embedded in certain political-economic environments" (p.3). Smallholders thus face different circumstances and that their responses to value-chains expansion differ. How and why socially differentiated groups respond differently to expanding value-chains within the same industry and local setting remains an interesting area of research and is central to this researcher (Bolwig et al. 2010; Tobin et al. 2016).

This paper addresses two principal objectives. The first explores terms and conditions for sugar value-chain inclusion in differently structured outgrower schemes and how these shape outcomes in southern Zambia. The second focuses on processes shaping inclusion and/or non-inclusion in sugar value-chains – structural

and non-structural – and how local reactions differ. By doing so, the paper highlights complex layers of inclusion and exclusion for smallholders variously linked to sugar value-chains, important for rethinking rural politics, the nature and character of value-chain participation and/or non-participation (Xu 2018). These elements can be addressed by unpacking social-economic and political processes that underpin inclusion and exclusion in local spaces, and then linking these to interests of, and reactions from local groups. This paper is structured into five main sections. In the next section, the paper introduces framings of inclusion and exclusion in value-chains and political reactions from below. Section three is the methodology. Research findings are presented in section four, and based on these results, the paper reflects on understanding of key trajectories of investment options for smallholders and political reactions from below in section five.

## **2. Inclusion, Exclusion and ‘Political Reaction from below’**

In agrarian political economy literature, political reactions from below in LaSAIs have narrowly focused on forms of resistance (Moreda 2015; O’Brien et al. 2006; Martiniello 2015; Edelman 1999; Gingembre 2015). Recent literature neglects reactions from below have tended to ignore reactions between and among poor people themselves, other triggers of political reactions beyond struggles over access and control over land and struggles of included smallholders such as the way they contend with terms of incorporation in outgrower schemes (Xu 2018). Yet, diversity in smallholder coordination arrangements means others might adapt and embrace changes in land use and land control (Castellanos et al. 2015; Franco et al. 2011). Studies such as Hall et al. (2015) identify key areas that shape processes of exclusion, mainly around land access but recent studies show land access is not always empowering (McKay and Colque 2016). That some smallholders actively choose not to participate in value-chains even with land access means that a better understanding of local processes of inclusion and exclusion is needed which should go beyond the question of land to include “broader dynamics of change in social relations” (Borras and Franco 2013, p.1741). This requires that processes that shape inclusion and exclusion and other elements there in should be critically interrogated – in a somewhat relational and dynamic way, considering diverse interests, and demands during land-use and land-control changes within outgrower schemes (Xu 2018).

Outgrower schemes have been promoted as inclusive institutional and organisational arrangement in the 'land-grabbing' debate (FAO 2009), often portrayed as route to obviate land displacements (World Bank 2011) and pathway for producing 'win-win' outcomes for participants (Hall et al. 2017; Smalley 2015). To Braun and Meinzen-Dick (2009, p.3):

“...schemes that involve existing farmers and land users can enable smallholders to benefit from foreign investment while giving the private sector room to invest...they leave smallholders in control of their land but still deliver output to the outside investor.”

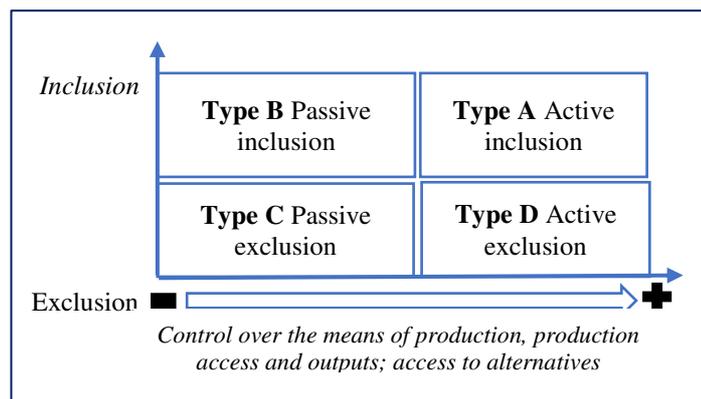
Peluso and Lund (2011) show that LaSAls seek opportunities to control productive resources such as land and water, with outgrower schemes emerging as important forms of land control (Vicol 2017). Land control in outgrower arrangements determine whether local communities are incorporated into commercial value-chains favourably or adversely. Thus, the politics of such deals revolve around terms of inclusion or struggle for incorporation and struggles over land access and against expulsion (Borras and Franco 2013, p.1735). The reality however is more complex, as there are other triggers and diverse political reactions from below that require consideration. Within the expansion of the sugar industry in Zambia, some smallholders became incorporated when they started growing sugarcane or leased their land for sugarcane production. Yet some smallholders were excluded, reflective of Hall et al.'s argument that “the inclusion of some land uses, and some land users necessarily means the exclusion of others” (Hall et al. 2013, p.13).

Terms and conditions of inclusion as well as links within the value-chain (vertical or horizontal) can produce divergent outcomes (Du Toit 2004). In vertical linkages, smallholder autonomy and capacity closely relate to access to diverse resources such as land, labour and financial and social resources, including dependency on upstream (e.g. input companies) and downstream actors (e.g. processing mills) (Xu 2018). When smallholders control abundant resources (material and social) or engage upstream or downstream actors at the same time (e.g. processing), they have more bargaining power, enhancing their benefits (Hall 2011). The opposite (i.e. limited means of production, constrained by monopolized channels for accessing input) can likely lead to adverse incorporation. For the included and excluded, access to alternative livelihood sources is key. For those who have better

alternatives, inclusion might not always be desirable and exclusion not always disadvantageous, which raises the role and importance of rural incomes and inequality.

In our study, exclusion refers to the situation of some smallholders who are not contracted to grow sugarcane, and thus, 'are unable to benefit from sugarcane.' In this sense, smallholders who are excluded are those who do not plant and grow sugarcane, either because they do not have contractual agreement with Zambia Sugar Plc (ZaSPIC) – the buyer and processor – or they do not have access to land in the sugarcane catchment area and lack necessary capital for investments, or because they do not have interest in growing sugarcane thereby seeking alternative livelihoods altogether. However, from an alternative livelihood perspective, smallholders who are excluded might not necessarily be losers.

Access to land, labour and other financial and social resources can be crucial, including the degree of dependency on intermediaries and processing companies, which shapes bargaining power and exclusion in outgrower schemes. Agribusiness' dominance in markets can limit local control over production processes and output – productive exclusion (McKay and Colque 2016). With a consideration of access to alternative sources of income, Xu's complex typology of inclusion and exclusion is helpful in uncovering 'active inclusion,' 'passive inclusion,' 'active exclusion,' and 'passive exclusion' (2018, p9) (Figure 1).



**Figure 1:** Typology of smallholder positions (Xu 2018)

Faced with rapid sugar value-chain expansion, active inclusion considers smallholders with enough control of diverse sources of income apart from sugarcane and engage in alternative livelihood sources. The opposite points to limited or no control of income and livelihood sources within value-chains – 'passive inclusion.' In contrast, control of

enough means of production and/or access to alternative sources of income outside sugarcane highlights 'active exclusion.' The opposite limited or no access to alternative sources of income away from sugar value-chains points to passive exclusion. Whilst these typologies are ideal types and frames for understanding local dynamics of inclusion and/or exclusion, they present important opportunities for exploring diverse local reactions to value-chain expansion.

In Zambia, outgrower schemes and value-chain inclusion have been encouraged as pathway to rural development, and poverty reduction (Manda et al. 2019). Smallholders in particular face similar socio-political and ecological dynamics of sugarcane expansion, yet their reactions are varied and complex. Some of the smallholders become incorporated into while others are excluded from sugar value-chains; some have embraced sugarcane, while others included and/or excluded express opposition with some within the latter categories presenting a positive desire and perception of sugarcane uptake. How divergences among affected community members and how differentiated farmers respond differently to emerging value-chains is central to this research. Recent efforts reveal complicated trajectories of political reactions from below to LaSAIs, which is mixed and more dynamic (McAllister 2015; Alonso-Fradejas 2015). Local community members do not always resist value-chain expansion: they adapt and welcome changes to land-use and land-control (Mamonova 2015).

In the absence of grounded insights into actual interests, perception and reactions of smallholders, it is difficult to appreciate broader claims around investment options and outcomes. In Southern Zambia for instance, political reactions by smallholders revolve around land control and struggles over levels of land rent (Hall et al. 2017). This requires examination of varied and complex ways through which the included and excluded smallholders respond to sugar value-chain expansion and how different groups position themselves within the same industry setting. Attention must be paid to not only terms and conditions of inclusion and production of divergent outcomes but also processes that underpin these elements, which is a focus of this study.

### **3 Research Design and Methodology**

#### **3.1 Studying the 'Sugarbelt' district of Mazabuka**

The sugar industry in Zambia reflects three regimes: private-sector driven (1960-1972); government supported through nationalization (1972-1995); and privatisation (1995 – to date). Current sugar production is concentrated in Mazabuka, one of the poorest districts in southern Zambia with an estimated population of 221,893 67% of which live in rural areas (CSO 2014). Dubbed the ‘Sugarbelt,’ Mazabuka is known for its dominance in sugar production. Agriculture is the dominant activity, and customary land ownership is common among smallholders. The entry of Illovo Sugar Plc around the year 2000 permitted ZaSPic to develop an additional 10,500ha of sugarcane, leading to a 114% ( $n=225$ ) increase in smallholder participation between 2009 and 2018 (Manda et al. 2018a). However, smallholder production accounts for only 10.3% of the total can supply, compared to 29.7% for commercial farmers and the balance under ZaSPic 9ZaSPic 2017).

### **3.2 Study Sites**

Two outgrower schemes were selected based on differences in production and institutional arrangements guiding smallholder inclusion. Production arrangements involve leasing land from an intermediary and engaging in direct household sugarcane production or leasing out land to management companies who then produce on behalf of lessors for a share of dividends (Matenga 2017). We were interested in how differentiated outgrower schemes shape terms and conditions and processes underpinning inclusion and exclusion from sugar value-chains within the same industry setting. For example, we examined how terms and conditions as well as processes of inclusion promote win-win solutions or by contrast hinder local wealth accumulation among smallholders (Hall et al. 2017). We examined two contrasting case studies of outgrower schemes to draw comparisons about investment options, political reactions from below and critically analyse why local communities experiencing value-chain expansion react the way they do (Table 1).

The first scheme was Kaleya Smallholder Company Limited (KaSCOL) formed in the 1980s and growing from 64ha and 8 farmers (1984) to 2,400ha and 160 smallholders (2018). The scheme was built on vacant land, incorporating farmers from different parts of the country. In Kaleya, all land belongs to KaSCOL, and farmers are tenants running a 14-year lease. Each

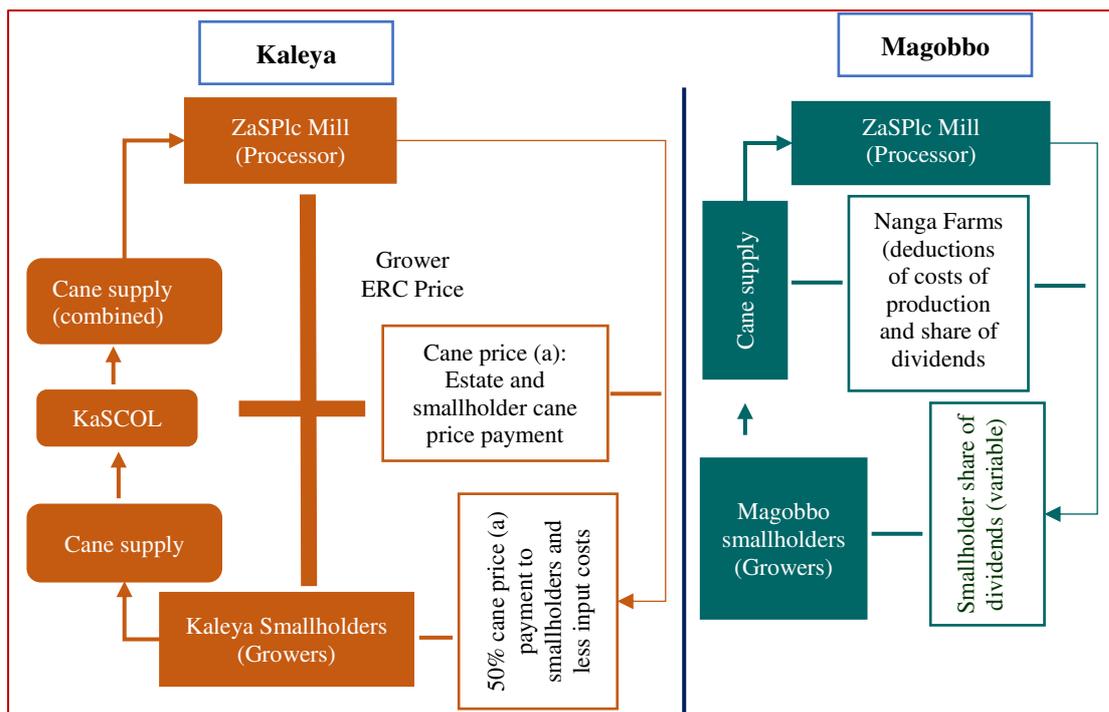
farmer cultivates an average 7.5ha sugarcane field, and 0.5ha as residential and subsistence production area. Whilst KaSCOL provides farming inputs and extension services, smallholders ensure cane field management. Meanwhile, smallholders hold 19.5% equity share in KaSCOL.

**Table 1:** Size, ownership and inclusion characteristics of the study outgrower schemes

	<i>Average land per outgrower (ha)</i>	<i>Type of field for sugarcane cultivation</i>	<i>Ownership</i>	<i>Original land owners/project landowners</i>	<i>Exclusion of some original land owner</i>	<i>Scheme labour</i>	<i>Inclusion determination</i>
Kaleya	6.5	Individual fields Block plantation	Company1 4-year lease	No Mostly	Yes	Outgrowers Paid labour (1per household)	<ul style="list-style-type: none"> <li>▪ Industry/mil</li> <li>▪ Chiefs</li> <li>▪ Local government structures</li> <li>▪ Community member</li> <li>▪ Existing land ownership</li> </ul>
Magobbo	4-7		Outgrower-owned trust		Yes		

The second scheme was Magobbo Sugarcane Scheme, formed in 2008 and formerly a resettlement area. The government acquired the land from previous ranchers and resettled farmers, including former workers on the ranch. Prior to sugarcane, farmers grew various crops including maize, cotton, groundnuts, and cowpeas, sunflower and reared livestock. The Magobbo scheme was driven by support from the European Union’s Accompanying Measures for Sugar Producing (AMSP) countries (Matenga and Hichaambwa 2017).

All cane produced by smallholders is delivered and weighed at ZaSPIC’s weigh-bridge, often with no smallholder representation. ZaSPIC can reject any load of cane for instance if it is found with extraneous materials damaging to the mill or if the juice quality of the cane is below minimum quality standards. In Kaleya, smallholder payments to all growers are calculated on cane yield per hectare. ZaSPIC buys sugarcane simply as a commercial transaction, but ultimately pays for sucrose – (Estimated Recoverable Crystal) (Figure 2).



**Figure 4:** Commercial transactions and payment arrangements in Kaleya and Magobbo. Upward arrows show commercial transactions (product movement). Downward arrows show price transmission (payments) (Derived from community interviews).

In Magobbo on the other hand, farmers receive a share of proceeds per hectare. This affected the way risks and cost of failures are carried, including accountability of the intermediary Nanga Farms Plc (NaFPlc) (a subsidiary of ZaSPIC) on efficiency (e.g. wastage, poor crop management).

### 3.3 Data Collection Approaches and Analysis

Multiple approaches were used to collect data on terms and conditions shaping smallholder sugarcane production as well as factors shaping smallholder participation in sugarcane production, terms and condition as well as reactions over a period from June 2015 to February 2016. Multi-level semi-structured interviews were undertaken with multi-level key informants ( $n=28$ ) (Table 2)<sup>1</sup>. National and industry interviews with state actors, donors, academics and private sugar consultants asked questions about structural determinants of smallholder integration in sugar value-chains, which were then linked to the conditions for sugarcane cultivation. Structural determinants of smallholder inclusion in sugar value-chains related to the overall structure of the chain

<sup>1</sup> See the supplementary material for the list of all participants

and related actors. These include factors related to production and marketing dynamics as well as practices by state and donor actors. Interviews with district officials and community actors considered terms and conditions for growing sugarcane and processes for smallholder participation in outgrower schemes – the latter related to non-structural determinants of inclusion and/or exclusion. In community discussions, non-structural factors related to social-cultural practices around land ownership, inheritance and rules guiding membership in smallholder schemes as outlined below.

Questionnaires explored land-use and land control responses (Table 2). Simple random sampling allowed us to select household survey participants from scheme membership records. This was combined with convenient sampling, locating convenient cases who meet the required criteria and then selecting those who respond on call until sample size quotient was reached (Robinson 2014). Exploratory questionnaires ( $n=180$  in total) were carried out with households in Kaleya ( $n=80$ ); Magobbo ( $n=70$ ), the latter including non-cane growing households as control ( $n=31$ ). To generate the control, preliminary group discussions with association leaders and committee members permitted us to reach non-cane sugarcane growers. We deployed a 5-kilometre radius to cover all the non-cane growers inside and around sugarcane schemes as control. Kaleya could not yield non-cane growers within the given radius. Non-cane growers were incorporated to explore political reactions to exclusion and the processes related to sugarcane expansion. Questionnaires solicited smallholder views on cropping patterns, land use changes, employment opportunities, and marketing.

**Table 2:** Sample description

<i>Characteristics</i>	<i>Kaleya Cane Growers</i>		<i>Magobbo Cane growers</i>		<i>Magobbo Non-Cane growers</i>		<i>Total Number</i>	<i>Percentage</i>
	<i>Number</i>	<i>%</i>	<i>Number</i>	<i>%</i>	<i>Number</i>	<i>%</i>		
<b>Age</b>								
20-29	7	46.7	3	20	5	33.3	15	8.3
30-39	16	40	8	20	16	40	40	22.1
40-49	10	43.5	12	52.2	1	4.3	23	12.7
50-59	14	33.3	21	50	7	16.7	42	23.2
60+	32	57.1	22	39.3	2	3.6	56	30.9
Non-Response	1	20	4	80	0	0	5	2.8
<b>Sex</b>								
Male	52	40.3	53	41.1	24	18.6	129	71.3
Female	28	53.8	17	32.7	7	13.5	52	28.7

<b>Marital status</b>								
Single	6	46.2	6	46.2	1	7.7	13	7.2
Married	50	39.4	52	40.9	25	19.7	127	70.2
Divorced	4	80	-	-	1	20	5	2.8
Separated	2	50	2	50	-	-	4	2.2
Widowed	17	60.7	7	25	4	14.3	28	15.5
Non-response	1	25	3	75	-	-	4	2.2
<b>Occupation</b>								
Agriculture	80	48.8	70	42.7	14	8.5	164	90.6
Business	-	-	-	-	11	100	11	6.1
Builder	-	-	-	-	1	100	1	0.6
Mechanic	-	-	-	-	1	100	1	0.6
Pump Man	-	-	-	-	2	100	2	1.1
Teacher	-	-	-	-	2	100	2	1.1
<b>Age</b>								
Mean	54.1	-	56.5	-	39.8	-	-	-
Median	56	-	55	-	36	-	-	-
Minimum	20	-	24	-	24	-	-	-
Maximum	96	-	101	-	67	-	-	-
<b>Household Size</b>								
01-4	2	9.1	10	45.5	10	45.5	22	12.2
05-09	48	51.1	30	31.9	16	17	94	51.9
10+	30	50.8	24	40.7	5	8.5	59	32.6
Non-response	-	-	6	100	-	-	6	3.3
Mean	9.5	-	8.5	-	5.8	-	-	-
Median	9	-	8	-	5	-	-	-
Minimum	4	-	1	-	2	-	-	-
Maximum	20	-	23	-	16	-	-	-
Total	80	44.2	70	38.7	31	17.1	181	100

**Note:** - = Not applicable

Meanwhile group discussions with cane growers considered processes and experiences of smallholder participation in sugar production ( $n=10$ ), considering age, gender and leadership. These were deployed to explore and understand local reactions to sugar value-chain expansion for both contract and non-contract participants. Group discussions with scheme leaders allowed stratification of household through wealth ranking classified as poor, medium and better off household. Subsequently, 12 households (2 from each category and across the 2 study schemes) were purposively selected for in-depth household interviews. Within Magobbo, one group discussion was conducted with non-sugarcane growers to explore actual experiences and reactions to value-chain exclusion and the underpinning processes (Table 3).

**Table 2: Study participants and data sources**

<b>National and industry level key informant interviews (n=12)</b>		
<i>Actors</i>	<i>Characteristics</i>	<i>Participants</i>
National actors	Smallholder irrigation project coordinators, officials in the Ministry of agriculture and the ministry of lands including state agencies	6
Donor actors	International organisations (e.g. EU, Finnish Mission, Africa Development Bank and the World Bank)	4
Other actors	Academics and sugar consultants	4
<b>District and Community study participants and data collection sources</b>		
	Kaleya households (N=160)	Magobbo households (N=80)
Household Surveys – sugarcane growers/contract participants	80	70
Key informant interviews	8	8
In-depth household interviews	6	6
Focus group discussions	5	5
<b>Non-sugarcane/contract participants (Magobbo)</b>		
Household surveys – non-sugarcane growers/non-contract participants	Non-sugarcane growers	30
Focus group discussion		1

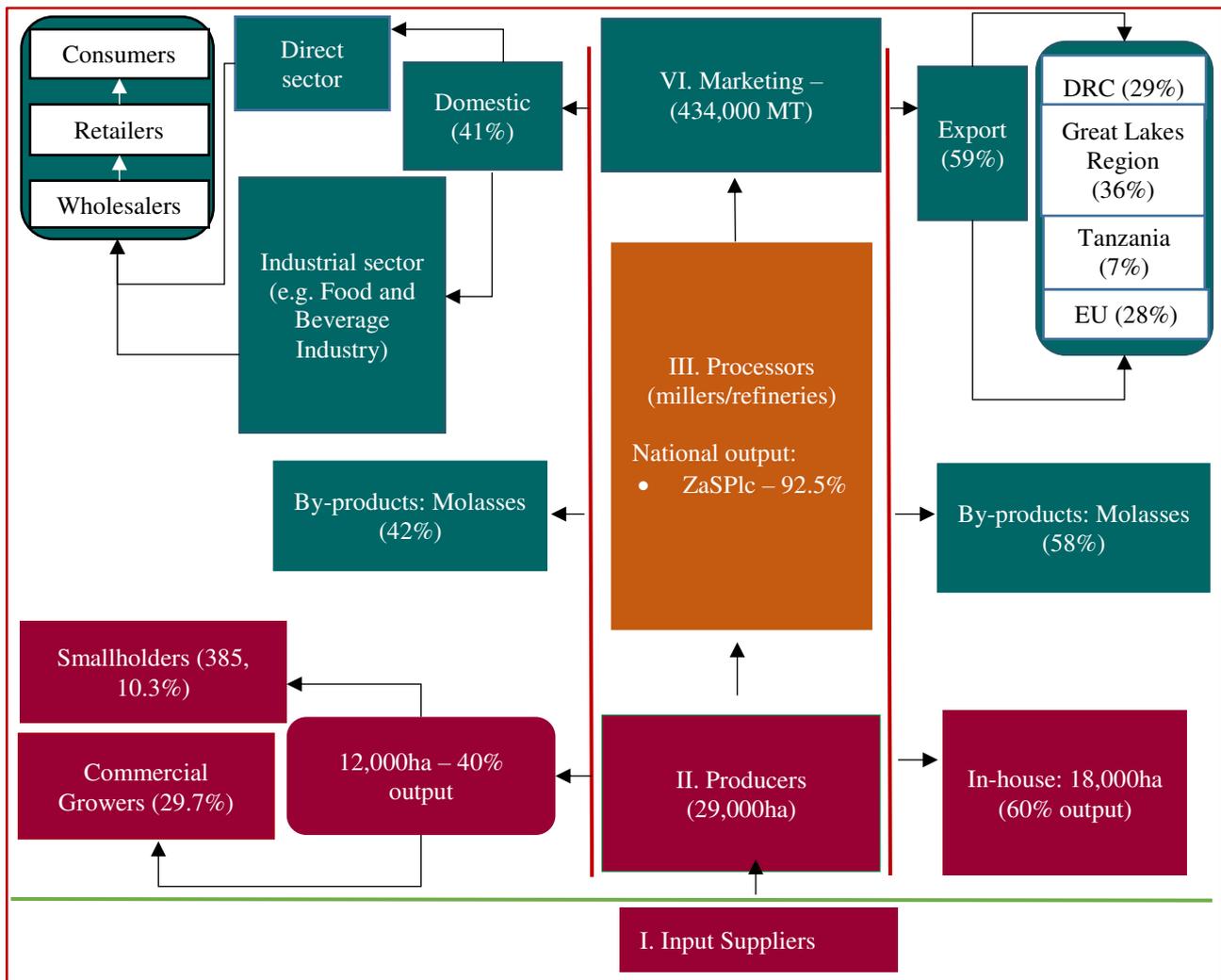
Community key informant interviews ( $n=16$ ) focused on wider community dynamics, resource use conflicts, and took an oral history style to recount historical processes and their influence on patterns of inclusion and why farmers react the way they do. This approach ensured that consideration of local reactions and layers of inclusion and/or exclusion were situated within the broader picture of how respondents carried on their lives (Pritchard et al. 2017). Key themes across the different data collection approaches interacted, allowing one form of data collection to feed into another thereby enhancing robustness (Johnson et al. 2007).

## **4. Results**

### **4.1 Structural Determinants of Sugarcane Inclusion**

#### **a. Public-Private Partnerships and Irrigation Management Transfers**

Public-private partnerships and irrigation management transfers were identified as important in promoting inclusion in sugar value-chains among smallholders. Donor and state actors have in the post-2000 period provided smallholder irrigation infrastructure, formalising institutions responsible for the management of outgrowers and then handing those over to groups of farmers to work in them. Recent scholarly efforts have shown strong connection between international finance in outgrower initiatives such as the EU's AMSP countries and sugarcane expansion, promoting smallholder inclusion in sugar value-chains as well as promoting the development of national adaptation policies. The centrality of the EU's 'aid for trade initiative' points to sugar industry competitiveness, diversification of economies of cane growing areas and addressing wider impacts of the reforms in adjusting countries (Richardson and Richardson-Ngwenya 2014). In Zambia, the adaptation strategy emphasised outgrower schemes; sugar diversification; infrastructure; and development of a national sugar trade policy (Palerm et al. 2010). This has ushered a new agrarian change as smallholders were given grants under the EU 'aid for trade' initiatives to supply sugarcane to ZaSPIC, heightening exposure to volatile world markets. One consequence is that within two years, an additional 1000ha of land were incorporated as sugarcane schemes in Magobbo and Manyonyo in vertically integrated value-chains, enhancing ZaSPIC's industry position (Figure 3).



**Figure 3: Zambia sugar industry structure based on stakeholder interviews (2017).**

State and donor actors promote irrigation infrastructure for smallholders to work alongside commercial entities as a strategy for poverty reduction. There are grounds for this optimism: “[w]e are displacing you from your land but giving you equity share in the scheme/company” explained one national official (Z1.29.06.15), adding “commercial entities should not lead to the exclusion of smallholders/local communities.” Whilst infrastructure expansion increased smallholder inclusion in sugar value-chains, consequences of superimposed models are complex and produce diverse outcomes for inclusion. Analysis shows such outcomes reflect history and institutional arrangements as well as the way land has been implicated in outgrower schemes, underpinning monetary gains (Table 4).

**Table 4:** Average gains in sugar value-chains (Extracted from household questionnaires)

	Kaleya (n=77)			Magobbo (n=65)		
	2013	2014	2015	2013	2014	2015
Production (tons)	795.143	835.481	754	Payment per hectare (average 4.2ha per household)		
Farmer prices (ZMK)	106.558	109.987	124.104	Unknown		
Gross annual income	77,337	83,605	85,778	48,083		
	Average deductions: ZMK 36,017			Average deductions: ZMK9,075		
Net annual income	41,320	47,588	49,761	39,008	24,213	29,270
Estimated monthly incomes	3,443	3,966	4,147	3,250	2,018	2,439

Two arguments for outgrower schemes are strengthened. First is that low quality and availability of government extension service mean that combined public and private support for agricultural knowledge and skills transfer as well as access to inputs and extension services in outgrower schemes can offer non-monetary benefits to smallholders participating in value-chains (World Bank 2009). Second is that by having more production via smallholders, the government thinks that the power of Illovo/ZaSPlc may be curtailed to enhance the role of smallholders. Fearing company take-overs, one official in the MoA feared that ZaSPlc might monopolise sugarcane, adding “can we hold down this monster called Illovo” (Z1:29.06.15). Recent efforts on Zambia and elsewhere have shown this is difficult given agribusiness ‘power of presence’ (Manda et al. 2018b), and state agencies that articulate different kinds of power (Wolford et al. 2013). Households who cannot access irrigation infrastructure and services are excluded. Donors advance irrigation, technical expertise and infrastructural development, although efforts remain slow, limited and localised around ZaSPlc. This spatiality and structure limits wider expansion of sugarcane among smallholders in the country and making processes of inclusion highly contested.

### **b. The Role of Corporations**

Corporations have been agreeable to integrate smallholders as suppliers in sugar value-chains. Large-scale foreign investments by Illovo saw a 141% increase in smallholder participants between 2009 and 2018 ( $n=225$ ) through the establishment of the Smallholder Development Office and the formation of Mazabuka Cane Growers Trust by ZaSPlc. To ZaSPlc, “smallholder inclusion is a deliberate effort to promote outgrowers as corporate social responsibility” (ZaSPlc2:06.15). A lack of resources, knowledge and capacity among smallholders has built a case for intermediaries that

cane guide farmers on agronomic, commercial and technical aspects of sugarcane. Smallholders require intermediaries partly because, from a management and quality perspective, there is a bias towards large scale and technical approaches to sugarcane processing even in projects aimed at small-scale farmers. However, the presence of intermediaries means participating farmers are not always able to perform particular roles in sugarcane cultivation or valued addition. In Kaleya, political reactions revolve around land control between smallholders and KaSCOL. In Magobbo, reactions centre on both land control and access to alternative production resources. Across the study communities, farmers blamed intermediaries for low incomes with some expressing the desire to work independently of intermediaries. Agribusiness dominance on the production has been blamed for resource dispossession and control, raising inequalities (Manda et al. 2018a; Chisanga et al. 2014).

Whilst sustaining smallholder inclusion, the current institutional set-up means intermediaries remain an extension and trajectory of corporate dominance within which smallholders are implicated passively. Thus, the publicly articulated focus on smallholder integration somewhat conceals ZaSPIC's expansion and concentration within the agro-industry chain which has ensured dominance in production (Figure 4). Such expansions mean that smallholders are included in subordinate positions, indicative of a transforming agrarian structure, in which smallholders negotiate different layers of inclusion.

### **c. The Role of Contracts, Quotas, Water and Markets**

Field work revealed how sugarcane agreements are important in outgrower schemes for controlling cane quotas, water priorities and allocation for irrigation, and markets as dynamics of inclusion. The delivery of contracts to growers for the supply of sugarcane expressed another conduit for smallholder inclusion. One official explained sugarcane agreements are “powerful and valuable documents without which one cannot cultivate sugarcane” (D15:28.06.15). These highly-sought after agreements are not only conduits for specifying quantities, varieties and standards expected and impressed through intermediaries but also mechanisms for determining the role of smallholders in value-chains. The perishability of sugarcane and to accommodate diverse growers, ZaSPIC runs a tight sugarcane supply quota arrangement. However,

quota allocation prioritised commercial farmers leading to exclusion for some smallholders (e.g. Magobbo).

For sugarcane, water is critical and emerging hydro-social relationships around the resource enable or limit possibilities for grower inclusion. In Mazabuka, ZaSPIC holds water rights, controlling the resource for sugarcane outgrowers, raising possibilities of adverse incorporation. More widely balancing interests within and across the schemes is difficult. In Kaleya, some farmers believe that the control and usage of water aligns/strengthens KaSCOL's sugarcane expansion, neglecting smallholders. In response and as a cost-saving measure, some farmers limit irrigation to only two cycles, which increases the crop's susceptibility to diseases (e.g. smut) and affects yields. Farmers report that it cost them an average of between £123-184 per irrigation cycle and that they were irrigating an average 5-6 cycles as opposed to average 10 cycles required per season. To many respondents, "relationships around water and water rights require urgent consideration" to enhance local participation (D15:28.06.15; G4:15.06.15). Within these relationships, what farmers can do or not determines active or passive inclusion.

Collective production arrangements mean that inclusion cannot always be active as balancing group interests remains a challenge in outgrower schemes. Farmers gave mixed views on the way sugarcane schemes were organised and on the merits of collective production. In Magobbo, one scheme leader argued that "producing sugarcane is costly" and that "individual farmers cannot afford on their own" while another one remarked that "it is easier to acquire and pay back bank loans" (SDM2:06.15).

Group discussions with farmers revealed that before sugarcane arrived, household members engaged in diverse land-uses and income generating activities such as crop or livestock production particularly by women. However, adoption of sugarcane meant that household members "are drawn on one source of income – sugarcane – which leads to intra-household conflicts," and this exclusion of some members may produce its own disadvantages for those who previously were able to engage in economic activities (passive inclusion). For instance, community discussions in Magobbo also expressed opinions that direct involvement by Nanga Farms proved costly as the service provider recovers all production costs before any

payment is due to farmers, thereby affecting profitability. A general feeling among respondents was that “as a committee we would want to get some works from Nanga Farms to reduce the payments we make to the service provider” (FGD, Magobbo 2015). In Kaleya, farmer complaints surrounded what they characterised as unclear commercial transactions, control over land and water, affecting investments in the scheme and restrictions on what smallholders can do within the scheme/dwelling lands. Combined, these dynamics are important in shaping local views on value-chain integration and political reactions.

#### **4.2 Non-structural Determinants of Sugarcane Inclusion**

In Magobbo, land ownership in the block-farm was crucial in determining smallholder cultivation of sugarcane. ZaSPIC required each household to hold a maximum of 4ha of land in the sugarcane catchment area. The landless, land scarce and marginal land-owning households were excluded, including the poor who could not afford to purchase land in the scheme catchment area (passively excluded). These were mainly women, the aged, widows and youths. Creation of the block farm has not provided any escape route for passively included farmers that might want to pursue alternative livelihoods and economic pathways outside sugarcane. Contractual agreements including the constitution requires a minimum of 20 years of growing sugarcane before farmers could claim back their initial land and possibly opt-out of the scheme/block and sugarcane or re-allocate their land to other activities. Focus group discussions revealed only few were aware of these conditions, with many feeling ‘trapped by inclusion.’

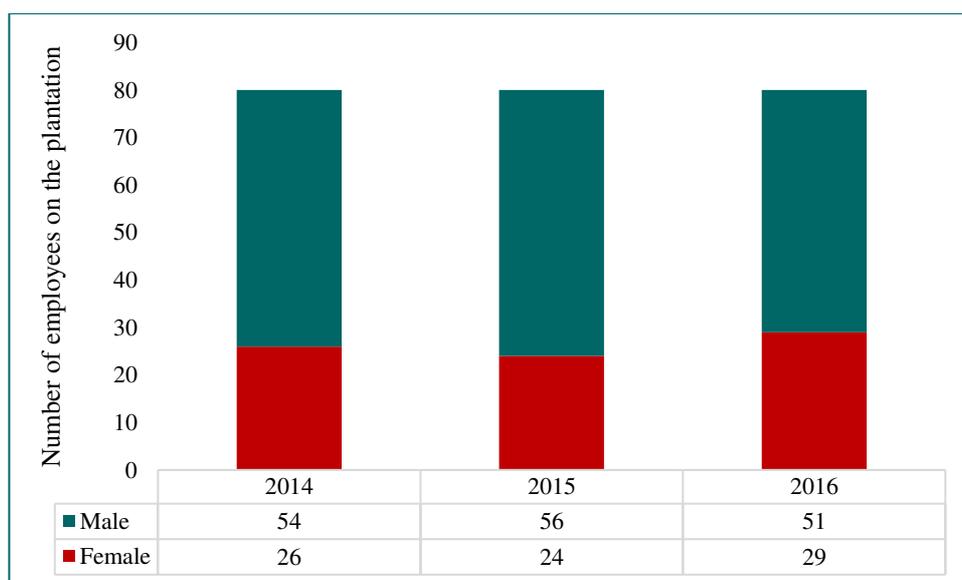
Given the ceiling on land ownership per household in the scheme, farmers with extra pieces of land in the catchment including those that opted out faced three possibilities. First, sell their extra land, but weak monetised land markets and low prices meant that some farmers lost out due to fear of incurring losses and the need to achieve quicker returns – and were thus adversely incorporated/or excluded. Second, swap an equivalent amount of land with anyone willing to join the scheme, but discounting – from economic calculations – preference, location, fertility and quality components of land since there was no way farmers could know the true value of the land. Third, lose out completely, as land in the catchment area could technically not be converted to other uses which would be against the agreement with ZaSPIC. Sugarcane payments from the trust land act as a source of income for committee

activities. However, this so-called 'buffer money' has been a sharp source of conflicts, and leadership contestations, raising governance challenges and accusations of misappropriation of funds for those within the scheme and outside. The latter is linked to the original agreement that monies realised from the extra pieces of land in the sugarcane scheme and which previously was utilised by the community (e.g. grazing animals) would be used for community infrastructure development – adverse exclusion for non-cane growers in the community.

Claims of land accumulation by some farmers were reported in group discussions and household case study interviews. For instance, the better-off farmers within and outside Magobbo community accumulated pieces of land in the scheme creating absentee landlords, as one caretaker remarked: “[t]he farm owner stays in town. He asked me to come here to join the sugarcane family” (SDM8.02.16). The land and resource poor category farmers that could neither swap nor buy land in the scheme remain passively excluded. To one manager at NaFPIc, participation by outsiders (with financial power to buy land from farmers in the catchment area) heightened stakes for exclusion. During fieldwork, divisions in the scheme were visible, with two parallel committees in operation and claiming legitimacy. A remark from one district official was illustrative: “Magobbo is where everyone wants to be in the sugarcane committee” (D6:06.15). Financial incentives available to committee members from the buffer money create possibilities of ‘elite-capture,’ with stronger socially connected farmers seen to dominate scheme governance. This was compounded by the fact that district officials prioritise commercial interests, in effort to maintain ‘opportunities’ for smallholders. Consequently, the scheme suffers from lack of control/guidance either from district officials or ZaSPIc/NaFPIc, entrenching power imbalances in the schemes. Whilst farmer discussions and interviews maintained that farmer organisations remain important in both schemes and in shaping plans for the future, capacity was inadequate, raising diverse outcomes for participants.

Within grower households, divergences and disputes around distribution of gains were reported in community discussions. For instance, in Magobbo, multiple claims to land were reportedly heightened by sugarcane adoption, leading to passive exclusion from within communities and households. Where powerful household members dominated, this resulted in alienation and exclusion of weaker members

such as youths and women from sugarcane incomes and decision making. Although a few devised plans for income sharing, this again affected what a household can do collectively (e.g. asset acquisition, investments). Within this account, women and youths constitute yet again another cohort of losers, typically facing marginalisation. Declining importance of livestock and reduced subsistence production has had impacts particularly on women, who traditionally participated in these activities (and are now passively excluded in sugarcane), compelling them to enter the sugarcane labour market (active inclusion) via employment. A scheme policy to recruit one worker from each household, against the culture that discourages them to engage in paid work and the perception that sugarcane is a man’s crop, has seen women participate in various tasks on the plantation including weeding (Figure 4). Group discussions with women cited poverty, poor expenditure decisions by husbands as heads of the household, unfavourable sugarcane returns, indebtedness, social prestige and the need to gain respect as some of the motivating factors for seeking wage employment.



**Figure 4:** Proportion of workers from smallholder households working in Magobbo scheme ( $n=80$ ; availed by Nanga Farms)

In reacting to value-chain dynamics, youths and women are willing to be incorporated in sugar value-chains on subordinate terms, highlighting unsavoury experiences from working on sugarcane plantations. Women complained about poor working conditions; low wages, and unfavourable work shifts that discouraged them from participating or getting overtime hours. Fears of health implications emerging from exposure to

dangerous sugarcane chemicals (e.g. on skin condition, reproduction) were also raised – adverse incorporation.

In contrast, Kaleya faces generational challenges with the passing of some 'original farmers' (102/160 farmers; 66%) in 2015. Whilst being successful at attracting young farmers, inclusion has become highly contested, more so in polygamous families since only one person, often a nephew, can legally inherit the sugarcane field. Inclusion in the scheme is defined either by a will or inheritance. However, serious inheritance disputes have been reported as one farmer remarked: "it is all about waiting for somebody to die in order to inherit the sugarcane farm" (GDK2:13.01.16). Cane fields are perceived as family-owned as opposed to individual, increasing claims as well as obligations on the part of inheritors. Increasingly, family members often organise to impose their preferred candidates or demand a share of proceeds. In response to family conflicts and most importantly land ownership structure in the scheme, farmers are seeking investment opportunities elsewhere: "this is just inherited property. I need to secure a future for my children" remarked one farmer (GDK2:13.01.16).

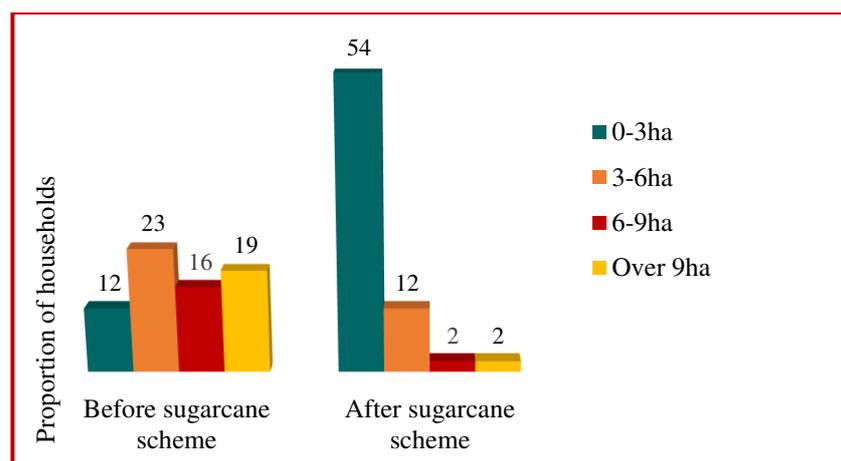
Within the Tonga tradition, opportunities for women are attached to their marital status and are clearly differentiated compared to their male counterparts. In Kaleya, strong beliefs were reported: "that farmers – predominantly male – do not entrust property in their children" (SDKc:19.01.16), heightening tensions within extended families. Culture is more challenging for women: "a female spouse – who has powers to remarry on the farm – cannot inherit" explained one KaSCOL officer (SDKc:19.01.16). Women shared the feeling that "their future in sugarcane was neither determined nor secured, more so if one was married to a successor" (GDK3:11.12) (passive exclusion). Some of these challenges related to failure by family members to actively pursue alternative livelihood/economic opportunities outside the scheme – a clear culture of sugarcane dependency. On high rates of school drop-outs, one smallholder association representative argued "it is not the question of financial resources," but "culture that sees sugarcane fields as promising a good future" (SDKc:19.01.16). The poor category households with no alternative production and livelihood resources were more likely to face sharp inheritance conflicts and negative perception of sugarcane. These households reflected poor

labour organisation and were unable to invest away from the scheme, highlighting crucial hierarchies within transforming social relations.

### **4.3 Passive and Active Exclusion among Non-Sugarcane Growers in Magobbo**

A focus on Magobbo permitted analysis of passive and active exclusion among non-sugarcane growers. Discussions with non-cane growers revealed original plans by promoters of the scheme to incorporate all settlers in the area as sugarcane growers. Farmers outside the sugarcane catchment area were to swap their land with farmers who had extra land (over 4ha) in the catchment area. However, rather than swapping, some farmers decided to sell their extra land for quick economic gains and exit sugarcane (active exclusion). Others just sold their extra land to maintain their 4ha as sugarcane plots in the block-farm. This led to an unintended lost opportunity for some farmers who wanted to cultivate sugarcane but could neither buy nor swap land. The sugarcane committee corroborates: “there were disagreements, some just resisted sugarcane and sold their land completely” (SDM2:06.15). Conversely, opportunities for new participants outside the scheme were created through land purchases, but these were the better-off. The landless, land scarce or those who were willing to swap but did not get that opportunity faced passive exclusion and expressed negative perceptions of sugarcane inclusionary processes.

In determining actual shifting patterns of land-use, transfers or sales, we asked farmers about land allocation before and after the sugarcane project and then probing current land availability (Figure 5). Survey data showed that on average, households held 2.3ha, 2ha and 1.6ha of land as available, accessed and utilised respectively, lower than before sugarcane adoption. This was clearly indicative of land transfers and conversions in relation to sugarcane expansion, raising diverse processes/layers of inclusion and exclusion (both passive and active).



**Figure 5:** Household land size before and after sugarcane uptake ( $n=70$ , from household surveys).

Two sets of factors were crucial for determining exclusion: 1) Active farmer decisions – leading to active exclusion; and 2) those related to project selection – leading to passive exclusion. We explored these factors in household surveys asking non-cane growers how important they thought these factors were in influencing their exclusion. Some farmers that were land insecure expressed unwillingness to participate in sugarcane production, judging the risks of loss of land in that sugarcane growers in Magobbo effectively leased the land to ZaSPIC. They also highlighted unclear sugarcane benefits as hindering inclusion. Other factors were indirect, relating to household contestations and those associated with the project selection criteria – which led to active exclusion for some farmers (Table 5).

**Table 5:** Factors influencing sugarcane exclusion in Magobbo ( $n=30$ ).

Exclusionary factors	<i>Very important</i>	<i>Important</i>	<i>Less important</i>	<i>Passive/active exclusion</i>
<b>Active farmer decisions</b>				
Fear of loss of land	60% (18)	20% (6)	20% (6)	Active exclusion
Unclear sugarcane benefits	17% (5)	33% (10)	50% (15)	
<b>Project selection criteria</b>				
Not owning land in the catchment area	88% (27)	12% (3)	–	Passive exclusion
Family land disputes	50% (15)	50% (15)	–	

No one to swap land with	–	71% (21)	29% (9)
Participation by outsiders reduced inclusion chances	9% (3)	36% (11)	55% (16)

Although some farmers were unconvinced about sugarcane benefits, survey data shows sugarcane remains appealing to 94% ( $n=28$ ) of the non-sugarcane growers who considered growing sugarcane in the future. Already some farmers were acquiring land in Kabesha (east of Magobbo) in response to rumours that the area will soon be an extension of the Magobbo block-farm. One non-sugarcane grower who acquired land in Kabesha remarked: “when sugarcane extends to Kabesha, I will automatically be a sugarcane grower” (SDM13:18.01.16). One major concern among non-cane growers was the incorporation of communal grazing land into sugarcane (about 23ha). Believing that money realised from the grazing land (buffer money) would be used to develop the wider community (e.g. infrastructure as social responsibility), non-cane growers agreed with the project promoters to release the land for sugarcane. However, this has proved problematic as one grower argued: “the money is not benefiting the community that originally accessed the grazing land” (SDM13:18.01.16). In this context, opportunities for cane growers translated into a crisis for non-cane growers, illustrative of how processes of inclusion sets into motion processes of exclusion, and the different layers in between.

However, some non-sugarcane growers have embraced these changes and reacted to seasonal patterns of sugarcane incomes, peaking during harvest (as plantation jobs open) and after sugarcane payments. Low and fluctuating sugarcane incomes and prices have pushed growers into Kaloba – a traditional lending system which charges 100% interest. Non-cane growers have seized this opportunity as money lenders by drawing from their remittances and other incomes to accumulate profits from cane growers: “sugarcane farmers borrow money from me whenever my children send me cash” (SDM9:18.01.16) (Manda et al. 2018a). The extent to which cane-growers are engaged in Kaloba is less known.

## **5.0 Rethinking Processes of Rural Value-Chain Inclusion and Exclusion in Agriculture Value-Chains**

This paper highlights lived realities and experiences, underlining how socially contested the intersection of global-local value-chain produces diverse and uneven but interdependent hierarchies of inclusion and exclusion. The paper has shown terms and conditions for smallholder inclusion produce unevenness within an investment, highlighting how farmers articulate themselves in investments as land-holders or employees. It has revealed that actual interests within a value-chain setting differ and so are the political reactions from below. And that determinants of inclusion are complex and go beyond structural market imperatives as assumed in dominant value-chain literature to include non-structural determinants. Here benefits for the included farmers are never straightforward which means not all included farmers embrace value-chains as desirable, with some always seeking opportunities for exit. Overall, recognition of the various social groups and their complex engagement and reactions to changes in land-use and land control have not only exposed competing interests but have shown how they can inform policies, institutions and investments to improve value-chain impacts.

Terms and conditions shaping smallholder inclusion are important in shaping how households are positioned in investment outcomes thereof. The centrality of inclusive business points to employment opportunities and actual engagement of outgrowers but related conditions for engagement vary between and within schemes (German and Parker 2018). There are diverse mechanisms through which outgrower schemes create hierarchies of dependencies for different groups at a local level. Some of these require a consideration of structural and non-structural processes underpinning inclusion and exclusion, and dynamics therein. Within the structural context, multi-level partnerships, corporate strategies and intermediaries create an inclusionary context, driven by a visible agribusiness influence (Peters 2013). Government and donor collaborations sustain conversations around private-sector development and smallholder integration for poverty reduction. Structural determinants of inclusion highlight a reliance on public sector financing which undermines claims of inclusion in business models. As German and Parker (2018) note, “the most responsible of investors are clamoring for public finance to advance this aim and their own corporate reputations” (p.15). However, fears of corporate take-

overs by state agencies highlight divergences between business and social objectives (German et al. 2016). Whilst national narratives enhance the role of smallholders in sugarcane, corporate expansion also limits their participation (Manda et al. 2019b). In part, this manifests itself in tight agribusiness control over land and water, with smallholder schemes rendering a systematic conduit through which resources are absorbed into corporate production (Manda et al. 2018a; Dobb 2016). Across case study communities, while coordination schemes present opportunities for economic and material accumulation, schemes fall short of being 'win-win' arrangements – there are winners (e.g. actively included and actively excluded) and there are losers (typically certain smallholder participants that are passively included and passively excluded). Rather than being homogenous, farmer groups are heterogenous with the better-off households obviously accumulating. The poorest households generally and particularly women and youths face exclusion due to various processes but are reacting to embrace agrarian changes through seeking employment (Hall et al. 2017).

Non-structural elements play even a greater role in shaping inclusion and exclusion among smallholders, contrary to some narratives (Barret et al. 2012). The social processes through which smallholders relate to value-chains differently and participation is clearly non-random as opposed to random. Any inclusion first relates to there being a farmer group/association, which intensifies inclusionary processes whilst opening hierarchies of inequalities within communities (Tobin et al. 2016; Ashraf et al. 2009). Processes of inclusion generate variable experiences such as from mixed farming to a narrow focus on a single crop, alongside the loss of rainfed farmlands which affect women as losers – trading off food for cash crop production (German and Parker 2018). This relates to the ways in which the schemes are instituted and managed, as well as how they interface with local social and political processes and practices, i.e. both the nature of the economic structures and the embeddedness with local socio-political processes and practices (Hall et al. 2017). One key aspect here for consideration is how the implementation of value-chains activates different local mechanisms for inclusion as well as exclusion, perpetuating local inequalities (Tobin et al. 2016). That some farmers are relocating and seeking livelihoods or investment opportunities away from the scheme highlight how production systems increasingly disconnect farmers from their position as growers and as custodians of the land (active

exclusion). However, fluctuations between passive inclusion and active exclusion are reflective of livelihood strategies – that are often precarious (Manda et al.2018a).

This means that economic benefits of sugarcane cultivation might be limited to a small proportion of smallholders, for instance, with employment opportunities prioritising cane-growing households. In our study, exclusion or inclusion on disadvantageous terms meant that some growers would always be willing to strike deals with the better-off to work on their behalf (in subordinate positions) and share gains – clearly gendered process (Broek et al. 2017). These transforming social relations points to a design challenge of how to share benefits to a wide-range of farmers within the value-chain intersection without marginalising them. Thus, any optimism placed on linking smallholders to markets through value-chains require a general rethink particularly that actual interests and reactions for included and excluded farmers are not a homogenous category. Firms and intermediaries seem oblivious to these social processes and structures within which they are operating. As a result, smallholder-firm interactions are confined to cane field operations as opposed to industry activities that might enhance local value capture. In Mazabuka, this is exacerbated by weak and fluid farmer associations that are production and survival oriented as opposed to strategically engaging with downstream actors around market and commercial activities that would generate greater value for their members over the longer term. Decision-making has been left in the hands of the minority who controlled benefits, including ‘buffer money,’ highlighting possibilities and consequences of elite capture (Phillips 2014). Two committees claim legitimacy in Magobbo – one voted out of power by the farmers, the other refusing to relinquish power – highlight this aspect. Through silences and occasional actions, corporations or district officials play complicit roles in entrenching scheme personal interests – and thus inequality. This highlight wider arguments smallholder incorporation in value-chains might be good for the company’s reputation but remain peripheral to the company’s strategy (German and Parker 2018).

Competing and divergent interests within local spaces further create challenges for participation. For instance, differences in priorities between sugarcane and livestock production highlights incompatibilities in farmer preferences. Divergences between those with land in the scheme; those that divided land to negotiate family

disputes; the economically powerful that bought land; and the land-abundant that swapped, further highlight uneven hierarchies of experiences and interests (Manda et al. 2018a; Phillips 2014). Clearly, presenting LaSAIs and ensuing contractual arrangements as alternatives to land grabbing is to create a false view about actual realities and competing interests. In any case, integration alongside inadequate smallholder participation in processes that ensure equitable benefit sharing means intermediaries are not always harnessed progressively within the collaborative environments such as outgrower schemes (Manda et al. 2018b; Howard 2016). However, unlike previous studies, this study shows active decisions on exclusion are not always economic in nature, they also relate to social and cultural processes within local settings.

In Mazabuka, sugarcane can be described as a ‘pull crop’ for drawing farmers towards commodity production and for being responsible for the majority of land conversion in the district. This aspect was incompatible and problematic for other forms of livelihood expansion (e.g. livestock) (Manda et al. 2018a). The incorporation of communal grazing land determined what the excluded could do (e.g. livestock, subsistence production, ecosystem services). Farmers opting out of sugarcane challenge assumptions that inclusion is necessarily desirable (Hospes and Clancy 2011; Bolwig et al. 2010). Reports where farmers sought investment and livelihood opportunities away from the schemes could mean an emerging farmer disconnection from not only land but also from their status as farmers (McKay and Colque 2016). As Adams et al. (2018, p.4) argue, “the grabbing might be slower than direct grabbing because farmers are not able to control inputs and output profits are lowered.” In contrast, land-grabbing projects itself through slow and systematic processes of ‘accumulation by dispossession’ enveloped within economic processes – what McKay and Colque refer to as ‘productive exclusion’ (2016, p.604). Clearly, sugarcane decisions are land and water decisions. Thus, the materiality of sugarcane produces inherent boundaries of inclusion and exclusion that growers must negotiate – passively or actively.

## **6.0 Conclusion**

This paper analysed how outgrower schemes as production spaces and platforms for competing interests produce diverse hierarchies of inclusion and exclusion. The study

showed that inclusion and exclusion are complex and multi-dimensional and that actual interests within a value-chain setting differ and as do the political reactions from below. This study showed that some farmers may embrace agrarian change and seek opportunities to tap into the benefits of value-chain activation through labour engagement or as land owners. Value-chain benefits for the included are never straightforward and that not all included farmers embrace such changes as always desirable, with some seeking exit opportunities. This study challenges simplistic dichotomies of inclusion and exclusion to advance a nuanced position of competing interests and different political reactions. Possibilities of smallholder inclusion reflect corporate, donor and public relations that shape the agro-industry structure in Zambia. In projects, the real value of these relationship lies less in government's ability to coordinate, monitor and discipline agri-businesses than in providing conditions for agribusiness expansion. That agribusinesses exert enormous industry influence, defining market dynamics, illustrates a failure if not inability of national and district actors to confront important elements shaping social processes of inclusion at scheme level. Within projects, complex factors interact to variously create pathways for inclusion/exclusion but are intensified by industry politics, structure and organisation.

This study offers a more detailed analysis of processes and determinants of inclusion and exclusion in value-chains and the different political reactions. A focus on social-economic sustainability in outgrower schemes is crucial for enabling participation and is vital if agri-businesses are to drive the agenda for poverty reduction and rural-development. Whilst inclusion requires strong scheme organisations that are driven by farmers themselves, attention must be paid to capacity within farmer structures. However, this requires stronger grower-intermediary-miller collaborations to enable fair benefit sharing rather than such collaborations leading relations that are binding or restrictive. The paper has demonstrated how the activation of value-chains produces various reactions and exacerbates inequalities within local spaces. Given the rationality of smallholders, our case shows that value-chain inclusion is neither a privilege nor inevitable pathway as claimed in dominant narratives on the topic (World Bank 2011; 2008). Rather, agri-industry transformation should offer smallholders choices for participation or exit. These positions must acknowledge diversities on either side, and most importantly consider how transforming tenure and social relations shape local choices for smallholders in

production spaces. A focus on local political reactions from below to land-use and land-control changes in wider political agrarian studies is narrow in interrogating processes of inclusion and exclusion on the production end of value-chains. For an early stage in planning of outgrower schemes by state and non-state actors, recognition of the various social groups and their complex engagement and reactions to changes in land-use and land control will not only expose competing interests but should inform policies, institutions and investments to improve value-chain impacts.

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## Appendix 1: Interviews June 2015 – February 2016.<sup>2</sup>

<i>Code</i>	<i>Position/Institution</i>	<i>Date</i>	<i>Place</i>
<b>National Level Interviews</b>			
Z1	Snr. Official a – MoA	29.06.15	Lusaka
Z2	Policy Analyst – MoA	04.01.16	
Z3	Coordinator b – MoA	04.01.16	
Z4	Snr. Official – MoL	15.12.15	
Z6	Director (Non-Mining Unit) – ZRA/ Snr. Inspector – ZRA	22.12.15	
<b>Donor Actors</b>			
K1	Official – Finnish Embassy.	18.06.15	Lusaka
K2	Agricultural Expert – AfDB	18.06.15	
K3	Agricultural Specialist – Wold Bank	16.12.15	
K4	Official – EU	10.12.15	
<b>Others</b>			
P1	Agriculture/Sugar Expert – AnChiCon	05.01.16	Lusaka
<b>District Participants</b>			
D1	Officer – MoA (Zimba)	14.11.15	Zimba
D2	Parliamentarian	11.06.16	Mazabuka
D3	Chief*a	27.11.16	
D4	Chief*b		
D5	Official *a	08.01.16	
D6	Official*b	06.15	
D7	Officer, Municipal Council	12.15	
D8	Officer, Community Development	26.06.15	
D9	Officer, MoCTA	27.11.16	
D10	Officer – SWASCO	16.01.15	
D11	Representatives – DATF	19.01.16	
D12	Officer, Planning Department	16.01.16	
D13	Agricultural Officer	01.16	
D14	NZP+ representative	22.06.15	

<sup>2</sup> Respondent's names are concealed to guarantee anonymity.

D15	Manager (FNB)	28.06.15		
<b>Sugarcane Companies and Service Providers</b>				
ZaSPlc1	Senior Marketing officer, ZaSPlc	06.01.16	Mazabuka	
ZaSPlc2	Senior Manager (Smallholder), ZaSPlc	06.15		
ZaSPlc3	MCGT representative (ZaSPlc)	06.15		
<b>Kaleya Smallholders Company Limited</b>				
SDKa	Senior Official	14.11.15	Kaleya	
SDKb	Officer (Finance)	19.01.16		
SDKc	Officer (Smallholder)	19.01.16		
SDKd	Officer (KASCOL)	17.11.15		
SDKe	Field Supervisor	26.11.15		
<b>Nanga Farms Plc</b>				
SDMa	Manager	20.01.16	Mazabuka	
SDMb	Officer (HR)			
<b>Interviews, Group Discussions and Household Case Studies: Kaleya</b>				
SDK1	KASFA representative (1)	06.15	Kaleya	
SDK2	KASFA representatives (2)	13.11.15		
SDK3	Teacher (St. Clement Basic School)	19.01.16		
SDK4	Original farmer	01.16		
GDK1	Farmer Group Discussion – Mixed	06.15		
GDK2	Farmer Group Discussion – Community representatives	13.01.16		
GDK3	Group Discussion – Women	01.16		
GDK4	Group Discussion – Youths			
<b>Household Case Studies</b>				
	Household Case studies:	12.15		
	<b>Better-off Category:</b>			
CSK1	SDK: Household 1			
CSK2	SDK: Household 2			
	<b>Medium Category</b>			
CSK3	SDK: Household 1			
CSK4	SDK: Household 2			
	<b>Poor Category:</b>			
CSK5	SDK: Household 1			
CSK6	SDK: Household 2			

<b>Magobbo Scheme</b>			
SDM1	Settlement Committee Representative	21.01.16	Magobbo
SDM2	Farmer Group Discussion – Mixed	06.15	
SDM3	Group Discussion – sugarcane Committee		
SDM4	Group Discussion – Community Leaders	02.16	
SDM5	Group Discussion – Women		
SDM6	Group Discussion – Men		
SDM7	Group Discussion – Youths		
SDM8	Interview – Cretaker		
SDM9	Interview non-cane grower (1)	18.01.16	
SDM10	Interview non-cane grower (2)		
SDM11	Interview – Teacher (Magobbo Basic School)	01.16	
<b>Household Case studies:</b>			
	<b>Better-off Category:</b>	02.16	
CSM1	Household 1		
CSM2	Household 2		
	<b>Medium Category</b>		
CSM3	Household 1		
CSM4	Household 2		
	<b>Poor Category:</b>		
CSM5	Household 1		
CSM6	Household 2		
<b>Other interviews and Discussions</b>			
X1	Manager (Kafue Sugar Plc)	28.01.16	Mazabuka
X2	Manager (Greenbelt)		
X3	Group Discussion – Association representatives (Manyonyo Sugarcane Project)	27.06.15	
X4	Manager (Manyonyo)	29.06.15	
X5	Official (MoA)	29.06.15	Lusaka
X6	National Coordinator (MoA)	04.01.16	