



Long-term outcomes of agricultural investments: Lessons from Zambia

Fison Mujenja and Charlotte Wonani



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80-86 Gray's Inn Road
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1. Available at www.fao.org/economic/est/publications/trends

About the authors

Fison Mujenja is a researcher and consultant with RuralNet Associates Ltd, a private consulting firm focusing on rural development; he currently heads the monitoring and evaluation thematic area. Prior to joining RuralNet Associates, he worked for Mpongwe Development Company (MDC) where he was deputy head of the commercial department. He has a Masters of business administration and a Bachelor's degree in business administration from the Copperbelt University, Zambia.

Charlotte Wonani is a lecturer in the Department of Development Studies at the University of Zambia and an adjunct lecturer with the Eastern and Southern African Management Institute (ESAMI). She specialises in development work and in policy development and analysis. She has been involved in research in the area of agriculture and rural development focusing on emergent and commercial farmers in areas such as agribusiness and food security, and has provided consultancy services for various international, regional and local organisations.

Acronyms

CDC	Commonwealth Development Corporation
CSO	Central Statistical Office
DFID	Department for International Development (UK)
ERC	Established Recoverable Crystals
ETC BioEnergy	Export Trading Company BioEnergy
FAO	Food and Agriculture Organization of the United Nations
FISP	Farmer Input Support Programme
FSP	Fertilizer Support Programme
GDP	Gross domestic product
GRZ	Government of the Republic of Zambia
ha	Hectare
IFAD	International Fund for Agricultural Development
IIED	International Institute for Environment and Development
KASCOL	Kaleya Smallholders Company Ltd
KASFA	Kaleya Smallholder Farmers Association
MDC	Mpongwe Development Company Ltd
NAMBOARD	National Agricultural Marketing Board
NAP	National Agricultural Policy
NAPSA	National Pension Scheme Authority
PRSP	Poverty Reduction Strategy Paper
PTF	Privatization Trust Fund
UNDP	United Nations Development Programme
USD	United States dollar
ZDA	Zambia Development Agency Plc
ZEMA	Zambia Environmental Management Agency
ZMK	Zambian Kwacha
ZSC	Zambia Sugar Company

Executive summary

This report discusses two agricultural investments in Zambia: Kaleya Smallholders Company Ltd (KASCOL), on the one hand, and Mpongwe Development Company Ltd (MDC) and its successors (ETC BioEnergy and Zambeef), on the other. The two projects started in the 1970s and early 1980s as joint ventures between the government of Zambia and the Commonwealth Development Corporation (CDC), and were privatised in recent years. The involvement of the CDC reflected the development orientation of both projects at their inception. Given this circumstance and given the significant implementation time behind these two experiences, the case studies can provide valuable insights on the longer-term development outcomes of best-practice agricultural investments. These insights may be a useful contribution to today's international debates about agricultural investment.

The important caveat to this consideration is that, for much of their duration and until their recent privatisation, both projects had a strong development component beyond commercial returns. KASCOL is a certified fair trade operator. These characteristics make the project significantly different to the many, more recent investments that are being carried out in many parts of Africa as part of the ongoing global land rush. Recent changes in employment conditions, including wage levels, following the privatisation of the two companies illustrate the difference between investment mainly or solely driven by commercial returns and projects with an explicit development objective.

Despite their similar historical roots, the two case studies are very different. KASCOL is an agribusiness company operating in Mazabuka District, in Zambia's Southern Province. It is a single-product company that produces sugarcane on a farm situated about 8km south of Mazabuka, the main town in Mazabuka District. The sugarcane is sold to Zambia Sugar Company (ZSC), which mills the cane into sugar for the local and export markets, and is sold with fair trade certification. KASCOL started operating in 1980 and holds about 4314.9 hectares of land, of which 2265.3ha are fully developed and under cultivation. KASCOL's approach to business is a combination of own-production and contract farming on company-held land. Land is held as a 99-year lease, and KASCOL sublets about 1000ha of this land to 160 outgrowers on the basis of 14-year renewable contracts. The model also involves equity participation and board representation for smallholder outgrower farmers: an organisation of the outgrowers holds some 13% of the equity in the company, and a district-level sugarcane grower association holds an additional 25% equity.

ETC BioEnergy runs plantations for a total of 46,874 hectares in Mpongwe District, in Zambia's Copperbelt Province.² The landholding area is thus considerably larger

2. At the time of the research, in 2011, this venture was operated by ETC BioEnergy. It was subsequently taken over by another company, Zambeef. Depending on the relevant historical period, the venture is referred to in the report as MDC or ETC BioEnergy.

than KASCOL's. Of the total land area, 10,661 ha are currently developed, of which some 3000 ha are under irrigation. Various crops are produced, and the crop mix can change from year to year. In the last production season, this mix consisted of wheat, maize, soybeans, rice, mixed (dried) beans, barley and jatropha. Jatropha farming and processing were added to the venture by ETC BioEnergy following its takeover. MDC's 'traditional' crops are wheat, barley, maize and soybeans. Differently to KASCOL, ETC BioEnergy does not involve outgrower schemes or equity participations by local farmers. The business is run as a set of large plantations with high degrees of mechanisation.

In both experiences, enabling factors have played an important role in making the ventures possible. A key enabling factor in the initial stages of the KASCOL project was the configuration of expertise and contributions provided by the different shareholders. CDC and ZSC brought production and management expertise, while two banks brought financial resources to the new company. CDC, in particular, managed the initial set-up and provided management expertise. CDC involvement may also have played a role in lowering the risk profile of the project, thereby making it more appealing to private investors and lowering the rate of return needed to make the project a commercially interesting proposition. The early association with CDC was an important enabling factor also for MDC. CDC injected cash into the company and provided management expertise. The good rains and fertile soils of Mpongwe District have also contributed to its success. The company sits on an aquifer which has proved invaluable as a source of irrigation water. Partly due to the high productivity of the company, the road infrastructure has been developed and this has presumably reduced the company's transport costs. Both KASCOL and ETC were making healthy returns at the time of the research.

Though not set up as a development aid agency, CDC was in many ways a vehicle for delivering development aid to poor countries. It invested in the least developed countries and in sectors that would ordinarily be shunned by private investors: it undertook investment projects where financial returns were too low, too distant or too risky to attract capital flows from private investors. The British government did not require it to make a profit beyond that needed to service its debts. This suggests that strategically targeted development aid can play an important role in promoting commercially viable and socially inclusive models of agricultural investments.

Both companies are large employers in the Zambian context, but overall job numbers have remained small compared to the rural labour force. ETC employs a larger number of labourers, though its landholding is also much larger and its labour-to-land ratio is lower than for KASCOL due to higher levels of mechanisation. The large number of employees under ETC is mainly an outcome of the labour intensity of jatropha production. Both projects have experienced downward pressures on wages. And while both projects have created jobs in skilled positions, the rural poor are most likely to take up low paying jobs due to their generally low educational status. These circumstances raise real questions as to the best ways of reducing poverty in rural areas. Investment projects that maximise positive economic linkages

with local rural areas through multiple avenues appear to have the highest potential for impact on poverty.

In addition to jobs, important long-term benefits include public revenues, though in the case of ETC this benefit has been limited by tax incentives granted by government authorities; indirect livelihood opportunities, for instance for traders selling goods and services to company employees; and positive impacts on food security via household income (as shown by the KASCOL outgrower scheme) and effects on food production and prices (in the case of ETC).

Since poverty is predominantly rural, agricultural investments have significant potential in providing the rural poor with jobs and income growth. However, agricultural investments in rural areas are expensive, and financial returns are generally low. Additionally, where investments have taken place, the rural poor often take up low paying jobs due to their lack of education and skills. Therefore, in addressing the daunting problem of rural poverty, government should put in place policies that promote inclusive investments in agriculture. Investments in rural infrastructure should be top priority. Government should also double efforts in the provision of education to rural population. Adult education, and vocational training, should be extended to rural areas.

On the other hand, growing scarcity of valuable land in parts of the country is resulting in tensions around agricultural investments involving large plantations. This is particularly relevant in those parts of the country that appear particularly attractive to outside investors, for instance due to water availability or soil fertility. This is the case of the Mpongwe area, where commercial pressures on the land are on the increase. The circumstance is exacerbated by the different ways in which formal legislation and local people view land ownership in customary areas. Even in projects that have been established for a very long time, this situation can result in conflict over land, including encroachment and litigation.

Neither project is using the land allocated to it to its full potential. Where land is becoming scarcer and investors hold big tracts of land that they are not using, it may make economic sense to rent land to local farmers as part of contract farming arrangements. Renting unused land to local farmers can also help stem hostile attitudes by poorer groups towards large-scale operators. ETC is contemplating this option as a possible solution to encroachments on its land by villagers that have run out of land for farming as a result of demographic growth and increasing commercial pressures. But these experiences also highlight the importance of fully factoring in opportunity costs in land allocation decisions. Government should proactively ensure that investors do not hold on to land they do not utilise for many years. Mechanisms should be in place to only allocate to investors land that they can utilise within a reasonable span of time, and to withdraw land from investors that do not comply with agreed development plans.

The outcomes of agricultural investments are differentiated along gender lines. While it was not possible to establish the livelihood impacts of loss of resources when the

farms were established decades ago, the conversion of common property resources is likely to have particularly impacted women, who are often responsible for gathering wood and non-timber forest products. In the longer term, both projects have had gender-differentiated outcomes. The KASCOL smallholder scheme, whilst dominated by men, was deemed accessible by women, albeit with some limitations due to work loads and intra-household decision-making dynamics. This was illustrated by 28% of the outgrowers being women. Also, women had a strong voice in decision-making within households where women were registered as outgrowers. ETC employed significant numbers of women, with the provision of some important gender sensitive terms of employment (e.g. level of sick leave, or leave for caring of the sick) and opportunities for management-level staff to access training and professional development. But women's participation in the business seems confined in roles traditionally associated with women. KASCOL's seasonal employees also tended to confine women to tasks that are less physical such as planting which tended to have shorter cycles and paid relatively less than those assigned to men.

Overall, investments that include low-income groups as producers in the supply chain and as shareholders in decision-making and profit-sharing seem more promising than models that only purport to involve the poor as wage labourers. At KASCOL, outgrowers involved in the outgrower scheme appear to have higher incomes, better living conditions and higher levels of overall self-satisfaction than their counterparts who work as wage labourers in the same company. Similarly, joint ownership of the company, whereby local groups have an equity stake in the business, provides the poor with additional income opportunities and with avenues to oversee the management of the business. That said, the higher returns associated with participation in a business as a supplier or a shareholder are also associated with higher business risks, though mechanisms can be developed to manage some of these risks, particularly with regard to crop insurance. Also, an important concern relates to the terms of employment offered by the outgrowers: casual labourers hired by them enjoyed few of the social security benefits associated with direct employment with the company.

The often stated downside of inclusive models involving a big number of small outgrowers is high transactions cost. KASCOL, however, has managed to keep these costs at manageable levels because of three main factors: first, the outgrowers are geographically concentrated on one farm which makes it easier to provide them with extension services and to supervise their farming activities; second, the outgrowers use KASCOL land and this increases compliance levels in contractual matters as the cost of eviction from company land is high on the part of the outgrower, should they abrogate the contract; and third, outgrowers do not have alternative buyers of cane and this prevents them from side-selling their cane. While the overall number of KASCOL outgrowers is limited, this experience shows that collaborative models are possible and can be commercially viable.

In countries where governments are genuinely committed to poverty reduction, these observations create a powerful argument for effective policy interventions aimed at

promoting equitable inclusion of low-income earners as producers and equity owners. Given the benefits of collective action, collective equity ownership through a trust is perhaps more advantageous to the low income than having individual poor people each having few shares.

Of major concern is that large-scale agricultural investments that embody elements of KASCOL's business model are a rare practice in the current wave of agricultural investments in Zambia. Currently, we mainly observe three models facilitated by the government:

- large farm blocks with smallholder subdivisions meant for the settlement of mostly poor local populations, often with very little supporting infrastructure or any other support
- large farm blocks for commercial farming and, within the surrounding areas, land earmarked for smallholder farming activities without any deliberate strategy for creating inter-linkages
- a farm block comprising smallholder farmers that are integrated into the large-scale farming investment.

Very few ventures fall into this last category and are comparable to KASCOL's performance on inclusion of low-income groups. Investment and agricultural policies to support inclusive business models should start by recognising rural communities as resource owners. Most of the new farm blocks being opened up for commercial agriculture are on land under customary tenure and converted to leasehold with the consent of local chiefs. The government should ensure the inclusion of local communities as resource holders and business partners. Securing local land rights and achieving the equity objectives provided for in the Land Act of 1995 would require the government to provide for communal registration of customary land rights and for affirmative action to protect women's rights to land and natural resources. For example, the ongoing review of the Draft Land Policy should provide for joint registration of land that is under joint occupation by married people. The impact of large-scale investments on demographic changes should be taken into account in estimating future land needs.

With increasing population and the need for rural investments, it is becoming clear that land use planning, currently undertaken in urban contexts, should be extended to rural areas. Building on ongoing moves towards decentralised planning, the government should promote devolved, participatory land-use planning, where there is increased voice and visibility of affected people, especially women, and effective accountability mechanisms. The current system where chiefs are heavily involved in land allocation is not working well in some cases. Chiefs are increasingly becoming unreliable in matters of protecting the needs of their subjects.

Given the prevalence of seasonal and casual employment, labour legislation would also need to be reviewed to ensure that the terms of these types of employment meet international labour standards. Because women are concentrated in these

positions, this would have significant gender equity benefits. Private-community partnerships should be explored, and the KASCOL model provides a good starting point.

Looking beyond Zambia, the experience discussed in this report provides insights on practical ways to include smallholders in investment processes, both as suppliers and shareholders, and it is hoped that this report may help feed lessons learned into international policy debates about agricultural investments in the global South.

1. Topic, rationale and methods

This report discusses two agricultural investments in Zambia. It is part of wider research involving country reports from Cambodia, Ghana, Malaysia, Mali, Mozambique, South Africa, Tanzania and Zambia. In each country, research focuses on case studies of agricultural investments. The purpose of this body of research is to generate evidence on a range of different models for structuring agricultural investments, with a focus on models that hold promise for the inclusion of local farmers and communities. This includes a range of different models – from various types of joint venture and equity schemes involving local farmers to diverse contract farming arrangements through to the upgrading of existing plantations.

In Zambia, research has focused on two case studies: Kaleya Smallholders Company Ltd (KASCOL) and Mpongwe Development Company Ltd (MDC). The map in Figure 1 shows the location of the districts where the two projects are. MDC went into voluntary liquidation in 2006 and its farms were bought by Export Trading Company (ETC) BioEnergy, a Kenya-based group, and another investor. At the time of study, ETC BioEnergy sold the farms to a Zambian multinational agribusiness firm, Zambeef. The current name of the business is Zambeef Mpongwe Farms.³ Though liquidated in 2006, MDC continued to exist until 20 July 2011 when it was finally deregistered by the Registrar of Companies. Neither investment project belongs to the recent wave of agricultural investments that has attracted much international attention over the past few years, though the recent takeover of MDC farms has brought important changes in the business. The two projects started in the 1970s and early 1980s as joint ventures between the government of Zambia and the Commonwealth Development Corporation (CDC), and were privatised in recent years. The involvement of the CDC reflected the development orientation of both projects at their inception. Given this circumstance and given the significant implementation time behind these two experiences, the case studies can provide valuable insights on the longer-term development outcomes of best-practice agricultural investments. These insights may be a useful contribution to today's international debates about agricultural investment.

Despite their similar historical roots, the two case studies are very different. KASCOL is an agribusiness company operating in Mazabuka District, in Zambia's Southern Province. It is a single-product company that produces sugarcane on a farm situated about 8km south of Mazabuka, the main town in Mazabuka District. The sugarcane is sold to Zambia Sugar Company (ZSC), which mills the cane into sugar for the local and export markets, and is sold with fair trade certification. According to

3. In this report, name references are made to both Mpongwe Development Company and ETC BioEnergy, with a preference for Mpongwe Development Company whenever reference is being made to events before 2007, and ETC BioEnergy when referring to events after 2007. The name Mpongwe Development Company is used in cases where events cut across the two periods. The current name Zambeef Mpongwe Farms is not used because field research took place before or immediately after the takeover.

ZSC's latest annual report, sugar exports to the European Union make up 62% of total sales, while the rest is sold in the local market (ZSC, 2011). Interviews with ZSC management indicated that sugar is also being exported to a number of countries within Africa. KASCOL started operating in 1980 and holds about 4314.9 hectares of land, of which 2265.3ha are fully developed and under cultivation. KASCOL's approach to business is a combination of own-production and contract farming on company-held land. Land is held as a 99-year lease, and KASCOL sublets about 1000ha of this land to 160 outgrowers on the basis of 14-year renewable contracts. The model also involves equity participation and board representation for smallholder outgrower farmers. The association of the outgrowers holds some 13% of the equity in the company. A district-level sugarcane grower association also holds an additional 25% equity.

ETC BioEnergy (formerly MDC) runs plantations for a total of 46,874ha in Mpongwe District, in Zambia's Copperbelt Province. The landholding area is thus considerably larger than KASCOL's. The total landholding consists of three farm blocks, each with a separate 99-year lease. Farm number 4451 (Nampamba, 22,921ha) and farm number 4450 (Chambatata, 12,490ha) are used for crop production while farm number 5388 (Kampemba, 11,463ha) is used for ranching. Of the total land area, 10,661ha are currently developed, of which some 3000ha are under irrigation. Various crops are produced, and the crop mix can change from year to year. In the last production season, this mix consisted of wheat, maize, soybeans, rice, mixed (dried) beans, barley and jatropha. Jatropha farming and processing were added to the venture by ETC BioEnergy following its takeover. MDC's 'traditional' crops are wheat, barley, maize and soybeans. These crops have been grown for almost as long as the farm has existed. Of the traditional crop, wheat is exclusively grown as an irrigated crop while soybeans and maize are mostly rain fed. In recent years, the company has also produced winter maize, which is irrigated. Differently to KASCOL, ETC BioEnergy does not involve outgrower schemes or equity participations by local farmers. The business is run as a set of large plantations with high degrees of mechanisation.

The research took place in 2011, was based on qualitative research methods and involved visits to the sites where the projects are located. The visits enabled interviews and focus group discussions with a range of stakeholders, including company management, wage labourers, contract farmers, spouses of labourers or outgrowers, farmer associations, trade unions, customary authorities, residents, and government bodies. Additional interviewees included a former member of parliament who presided over land negotiations for the MDC project back in the 1970s; and management representatives from other companies, including ZSC and Krookes Brothers (a sugarcane estate). Particular attention was paid to gender issues, by integrating gender in the research questions and ensuring women and men participated equally in the study, usually in separate focus groups. Besides interviews and focus groups, observations were also made to the farms and farm infrastructure.



It is important to recognise the limitations of the study. Limited access to important data resulted in gaps in the analysis presented in the report. Both case studies involve private corporations that do not ordinarily disclose company information to the general public. The length of time in which both investments have been running made it impossible to provide a detailed analysis of performance and outcomes over history. The research focuses on the recent past, while reflecting awareness of history to the extent possible.

This report is divided into four additional chapters. Chapter 2 discusses the national context and analyses the policy framework and recent trends in large-scale agricultural investments. Chapter 3 discusses the design and implementation of the investment projects. Chapter 4 presents the socio-economic outcomes for the two projects and Chapter 5 is the conclusion.

2. National context

2.1 Socio-economic context

Zambia is a landlocked country in Southern Africa, with a population of around 13 million. The country is home to more than 70 ethnic groups. An estimated 38% of the population lived in urban areas in 2006, which makes Zambia one of the most urbanised countries in the region. The country is relatively sparsely populated, with the population growth rate decreasing as a result of the spread of HIV/AIDS (IFAD, 2012).

After independence, copper production was the main driver of the country's relative wealth in the Southern Africa region. This went into decline over the following decades but higher copper prices and better management of the sector in the past decade mean that copper continues to dominate Zambia's foreign exchange earnings (IFAD, 2012). Zambia's economy has also picked up and experienced sustained annual gross domestic product (GDP) growth rate of around 6% since 2005 rising above 7% in 2010. The agriculture sector has been growing at an average annual rate of 4.5% over the past two decades and currently accounts for about 22% of the country's GDP. Recent growth has been slower because of drought.

Agriculture provides the basis of livelihoods for the majority of the rural population. The country's agricultural production is dominated by small-scale farms cultivating landholdings of one to five hectares. The main food crops are maize, sorghum, cassava and millet. Most crop production is rainfed rather than irrigated. A revival in commercial agriculture, including maize, sugar, tobacco, cotton and coffee has been seen in recent years (FCO, 2012), with cotton, flowers, sugar, tobacco and vegetables dominating the export market, grown principally under contract farming arrangements (IFAD, 2012).

The country possesses a conducive climate, abundant labour and water to support agricultural development activities. Abundance of land is also often indicated as an important factor in Zambia's comparative advantage in agriculture. The country's total land mass is approximately 75 million hectares, of which 12% (or some 9 million hectares) is suitable for arable use (GRZ, 2002b). It is estimated that, of the 9 million hectares of suitable land, about 1.7 million hectares are under crop cultivation for subsistence and commercial farming (GRZ, 2009). However, earlier estimates indicated that some 6 million hectares were under cultivation (GRZ, 2006), so caution is needed in interpreting these figures. Also, it is not clear how fallow and grazing lands are factored in.

Zambia's dependency on a few commodities makes it somewhat vulnerable to fluctuating commodity prices (the country was enabled to recover from the global

financial crisis of 2008 due to favourably high copper prices and a bumper maize crop in 2010; see CIA, 2012). However, poverty remains a significant problem in Zambia, despite a stronger economy. Productivity is heavily influenced by weather patterns and chronic shocks such as cyclic drought severely exacerbate rural livelihood insecurity. Productivity is further stifled by poor infrastructure, markets, and agricultural inputs and services (FCO, 2012). Poverty levels vary substantially within the country, however. North-Western Province is one of the poorest, most remote and least developed parts of the country. Eastern and Southern Provinces also have a particularly high concentration of poverty. As a broad generalisation, the central section of the country is more fertile, while in the north the soils tend towards acidity and in the south the climate is drier (IFAD, 2012).⁴

2.2 The policy framework for investment in agriculture

The overall goal of Zambia's agricultural policy is to promote a self-sustaining export-led agricultural sector, which ensures increased household income and food security. Agriculture is seen as having the greatest potential to contribute to the reduction of poverty through its contribution to economic growth, and its inclusive nature. The emphasis on export-orientation implies a shift from the traditional focus on maize to other high value, exportable crops. Historically, Zambia's agricultural policy has favoured maize production, but policy has now shifted towards promotion of a more diversified agricultural product base.

Large-scale investment in agriculture was promoted soon after independence. Until recently, however, the emphasis was on state-led ventures, often in partnership with development agencies like the CDC. Examples include ZSC, originally run as a parastatal with CDC support, then privatised; the Tobacco Settlement Scheme and the Family Farming Tobacco Project, also long run as a government venture with CDC support; and Changanda Farms, established in 1977 as a Government Pilot Smallholder Tobacco Scheme, financed by a CDC loan, then voluntarily liquidated in 1981.

Since the 1990s, agricultural policy has shifted towards liberalisation of agricultural markets and trade, and privatisation of state farms. The promotion of private investment in agriculture is a central pillar of this new paradigm. Over the past few years, the Zambian government has adopted numerous policy and regulatory measures to attract investments and support responsible and value-driven businesses. An imbedded assumption in this vision is that sustained economic performance is going to be supported by increased investment flows from both local and foreign sources, primarily prompted by a stable, predictable and transparent social and political environment; a well-managed macro economy; and regulatory and policy frameworks that guarantee social justice for all. Recognising that developing the agricultural sector can contribute significantly to welfare improvements, especially of poor and landless rural households, the government has

4. <http://www.ruralpovertyportal.org/web/guest/home>

positioned agriculture as one of the driving engines for the economic growth and poverty reduction. This position is reinforced by the Industrial Policy whose emphasis on export-led development strategy recognises the agricultural sector as an engine of growth for the domestic economy (GRZ, 2010).

Within this context, the National Agricultural Policy (NAP) aims to facilitate and support the development of a sustainable and competitive agricultural sector in order to ensure food security and income generation at household and national levels and to maximise the sector's contribution to GDP. Commercialisation of the agricultural sector, by integrating small-scale farmers into commercial production through outgrower arrangements or as independent producers, is seen as a key strategy for implementing this policy.

In spite of recent policy pronouncements towards greater diversification of the agriculture sector, there still seems to be a bias towards maize production, probably understandably so since maize is the country's staple grain. In 2001-2002, Zambia experienced a severe maize shortage and was offered genetically modified maize donations by the World Food Programme (WFP); Zambia rejected the maize donation out of environmental and health concerns. This move appears to have pushed the government back to maize subsidies through the introduction of the targeted Fertilizer Support Programme (FSP), renamed Farmer Input Support Programme (FISP) in 2009. The maize bumper harvests that have been experienced in the last three consecutive farming seasons may be attributed partly to FISP. The government also introduced a government-owned Food Reserve Agency, which buys maize from small-scale farmers. This was a reaction to the slow pace at which the private sector was filling the vacuum left by the abolishing of government-controlled marketing companies at the height of liberalisation policies.

Apart from these isolated success stories in agriculture, the country is yet to have a vibrant agriculture sector. Promotion of private investment in agriculture is a central part of government efforts to promote agricultural development. Investment legislation includes a number of general safeguards for investors: free repatriation of net profits and debt payments; safeguards on investment protection (including full compensation based on market value for expropriations); and facilitation services provided by the Zambia Development Agency (ZDA) (e.g., in obtaining water, electric power, transport, and communication services and facilities required for their investments, in regularising investor immigration status, or in acquiring other licenses necessary to operate a business in any particular sector).

Tax incentives are also provided, including the following:

- implements, machinery and plant used for farming, manufacturing or tourism qualify for wear and tear allowance of 50% of the cost per year in the first two years
- duty free importation of most capital equipment for the mining and agriculture sectors
- corporation tax at 15% on income from farming

- farm works allowance of 100% of expenditure on stumping, clearing, prevention of soil erosion, boreholes, aerial and geophysical surveys and water conservation
- development allowance of 10% of the cost of capital expenditure on growing of coffee, banana plants, citrus fruits or similar plants
- farm improvement allowance – capital expenditure incurred on farm improvement is allowable in the year of incurring the expenditure
- dividends paid out of farming profits are exempt for the first five years after the distributing company commences business
- for rural enterprises, tax chargeable is reduced by 1/7 for the first five years
- for business enterprises operating in a priority sector under the Zambia Development Agency Act 2006, a 0% tax rate for the first five years, a rate reduced by 50% from years 6 to 8, and a rate reduced by 25% from years 9 to 10.

Finally, policy interventions concerning land tenure have also been used to promote investment – an issue that is discussed in greater detail in the next section.

2.3 Land tenure in policy and practice

Under Zambian law (Land Act no. 20 of 1996, chapter 184 of the Laws of Zambia), all land in Zambia is vested in the President and is held by him in perpetuity for and on behalf of the people of Zambia. For historical reasons, land in Zambia is generally divided into two categories: land in customary areas, which we will simply call customary land in this report, and state (or Crown) land. Customary land is land that was defined and reserved for indigenous peoples by the colonial masters under the Zambia (State Land and Reserves) Orders of 1928-1964 and under the Zambia (Trust Land) Orders of 1947-1964. About 94% of Zambia's land is said to be in customary areas. However, continued reference to customary areas in official documents, including the Land Act, is somewhat misleading. Many of the areas which were delineated and designated 'customary' under the Zambia (State Land and Reserves) Orders of 1928-1964 are no longer customary in the sense in which the term must have been originally used – in other words, they may no longer be used by indigenous peoples or based on customary rules. Indeed, some land in the 'customary' areas is today held on the basis of a leasehold title.

The remaining 6% of the national land is what is usually referred to as state land. State land was originally reserved for the exclusive use of European settlers (Roth *et al.*, undated). Again, continued use of this term in reference to the present land situation has led to some confusion concerning the relative importance of leasehold tenure – as will be discussed below. Also, ultimately all land in Zambia, including in customary areas, is vested in the President for and on behalf of the people of Zambia. So in a broader sense, all land is owned by the state.

Customary areas tend to be areas with low agricultural potential due to poor soils, poor infrastructure, or both. State land, on the other hand, tends to be served with better transport and communications infrastructure and has 'attracted virtually all the skills and investment necessary for the development of the country's resources', according to Banda (2011).

Both Mazabuka District, where KASCOL is situated, and Mpongwe District, where MDC is located, are rural areas with over 90% of the land being under customary tenure. No land in Mpongwe District and, in all probability, in Mazabuka District, is state land, implying that land that is currently under leasehold tenure in these areas was converted from customary tenure in customary areas.

There are two major systems of land tenure in Zambia which, to an extent, parallel the two land categories just described: customary and leasehold. Customary land tenure is what most Zambians, especially in rural areas, are familiar with. Customary law is unwritten and varies substantially from place to place. That said, land that is typically held under customary tenure is controlled by traditional chiefs on the basis of local customary laws, which are legally recognised as long as such laws are not in conflict with statutory law (e.g., with the Land Act of 1995). Chiefs are the custodians of land in their chiefdoms. By virtue of belonging to the chiefdom, a person has the right to use and occupy land in that chiefdom free of charge. However, the area chief has the right to withdraw land from anyone he deems to be violating customary rules. This can be an important source of tenure insecurity. In Mpongwe District, some villagers identified this as a major problem. According to villagers that participated in a focus group discussion, their chief was taking land from them and giving it to outsiders coming into the area.

Another source of concern in customary systems relates to gender. While customary systems differ across the country, they are all patriarchal in structure. The local chief may allocate a plot to a single woman, particularly if she has children, but it would not allocate a plot to a married woman in her own right. And often, women are given land of lower quality. When divorced or widowed, most women in patrilineal societies return to their parents' village, where they are dependent on male kin for access to land for production. Although there appears to be a growing trend in some provinces to let a widow use the land until the children are grown up, most widows are likely to lose a major share of their land after the death of their husband – especially those not related to the chief (Sida, 2008). That said, there are major differences in women's land rights across the country. For instance, while an impressive 80% of women in Kaoma, Western Province, claimed to have control over their land in a recent survey, the comparable figures for Monze, Southern Province, and Chipata, Eastern Province were 10 and 5%, respectively. This is attributable to differences in local culture: in Kaoma, the local system guarantees equal inheritance rights for male and female children, while in Southern and Eastern Provinces land inheritance patterns favour male children (Kachika, 2011).

Under national law, no matter how long villagers may have occupied or claimed ownership to a piece of land, they will have no officially registered title to it until the President alienates such land to them in the form of a leasehold. Such alienation converts the tenure status of the land from customary tenure to leasehold tenure. From that point on, the villager is required to pay ground rent to the state (the Ministry of Lands), and the area chief loses control over that land. In addition to local villagers, other Zambian nationals and foreigners can also obtain leaseholds. In the case of foreigners, the Land Act of 1995 limits this to the following circumstances: the non-Zambian is a permanent resident in the Republic of Zambia; the non-Zambian is a legally recognised investor; or the non-Zambian is a company registered under the Companies Act and less than 25% of the issued shares are owned by non-Zambians.

Leasehold tenure is regulated by statutory laws, which provide for a maximum of 99-year, renewable leasehold. Some official sources put land under leasehold tenure at 6% of the total land mass (e.g. GRZ, 2002). However, this figure may not be correct as it appears to equate leasehold tenure with the size of state land. As indicated above, usage of the term 'state land' is a carryover from the colonial period and was defined in the Zambia (State and Reserve Land) Orders of 1928-1964. Since Zambia became independent in 1964, there has not been any redefinition of the boundaries of state land: state land was, and has remained, about 6% of the total land mass. But 'customary' land can also be held under leasehold tenure. Farmers have increasingly resorted to this option. It is estimated that some 20% of the rural population holds leasehold titles. While leasehold tenure still accounts for a relatively small share of national land, it is likely to cover more than 6% of the national land. Access to leasehold tenure is differentiated along gender lines. Women's access to leasehold titles remains more limited, though the percentage of leasehold titles issued to women increased from 5% in 2005 to 16.5% in 2009 (UNDP, 2011).

The cumbersome procedures of converting land from customary tenure to leasehold tenure, the subsequent obligation to pay ground rent to the state, and the fact that the concept of title deeds is extraneous to local practice are some of the reasons why most villagers do not obtain title deeds on the land which, in their view, is theirs by virtue of them (or their ancestors) having lived there even before Zambia was born. This tenure context creates a breeding ground for tensions in cases where the government takes land away from local groups and allocates it to an outside investor.

The problem is compounded by the fact that while the government is able to convert land from customary to statutory tenure, there are currently no legal mechanisms for conversion from statutory tenure to customary tenure. Ordinarily, this should not be a problem. However, in the Zambian case where the majority of people cannot afford to hold land on statutory tenure, it poses a challenge and potential source of tension. The majority of Zambians use land for subsistence farming and the low productivity that characterises subsistence farming implies that the subsistent farmer is only able to produce enough for own consumption and is severely cash constrained. And since holding land on statutory tenure requires payment of ground rent to the state,

Box 1. Land alienation in Zambia

The Ministry of Lands is the main ministry mandated to carry out the functions of land administration. Because the Ministry of Lands has no district-level structures, local authorities are appointed as agents to process applications and select suitable candidates on behalf of the Commissioner of Lands. Recommendations made by local authorities to the Ministry of Lands may be accepted or rejected by the Commissioner of Lands.

Alienation of state land consists of the following:

- Land identification. Identification of land in any city, municipality, or district is the responsibility of the local or provincial planning authority concerned. Once land has been identified, the planning authority shall carry out its planning for various uses within the provisions of the Town and Country Planning Act and relevant regulations. Once the planning authority has planned and approved the area, the layout plans are forwarded to the Commissioner of Lands for examination of the land's availability.
- Allocation of land. Once land has been numbered and surveyed, the local authorities may advertise the stands in the news media or any transparent medium, inviting developers to apply to the Commissioner of Lands through the local authorities, using a prescribed form. On receipt of the applications, the local authorities will select the most suitable applicants for the stands and make recommendations in writing to the Commissioner of Lands, giving reasons supporting the recommendations. This recommendation letter will be accompanied by the full set of Council minutes. The Commissioner of Lands will consider the recommendations and may approve or disapprove them. The Commissioner of Lands will not approve a recommendation if it is apparent that doing so would cause injustice to others or if a recommendation is contrary to national interest or public policy.

Alienation of customary land involves a different process. Any person who holds land under customary tenure may convert it into a leasehold tenure not exceeding 99 years on application, in the manner prescribed. A person who has a right to the use and occupation of land under customary tenure, or has been using and occupying land for a period of not less than five years, may apply to the Chief of the area where the land is situated. The Chief shall consider the application and shall give or refuse consent. Where the Chief refuses consent, s/he shall communicate such refusal to the applicant and the Commissioner of Lands, stating the reasons for such refusal in a prescribed form.

Source: adapted from Ministry of Lands (available at http://www.ministryoflands.gov.zm/index.php?option=com_content&view=article&id=60&Itemid=87; last accessed in October 2012).

which most poor subsistence farmers cannot afford, conversion of huge tracts of customary land to statutory tenure by the few who can afford to do so effectively undermines access to land for the majority of the rural poor.

The Ministry of Lands, on behalf of the President, has the legal authority to alienate land. Land alienation applies to both state and customary land. In the case of customary land, land alienation by the President means converting land under customary land tenure into leasehold tenure. The Administrative Land Circular No.1 of 1985 provides guidance for land alienation procedures, including safeguards for customary land. Box 1 above gives some details on the process.

Outside titled land, land acquisition must involve local chiefs who, in consultation with their subjects, can either give or decline to give land for investment purposes. However, the Land Acquisition Act of 1970 allows compulsory acquisition by the state through the right to eminent domain. Also, the Land Act recognises large-scale investment as constituting a public purpose that would allow compulsory acquisition. German *et al.* (2010) report that the government has repeatedly urged traditional authorities to release land for investment on the premise that traditional land is insufficiently utilised and should be brought under productive use through large-scale commercial investments. These authors also state that consultations are minimal, information exchange incomplete, the beneficial aspects of such land acquisitions and resulting investments oversold, while consequential negative aspects are generally downplayed.

Under the Investment Act of 1995, an investment centre was established to facilitate investments in both agricultural and non-agricultural sectors. The centre was later amalgamated with various other government bodies and is now known as the Zambia Development Agency (ZDA).

Under the Zambia Development Agency Act, the ZDA in collaboration with the Ministry of Lands assist an investor in identifying suitable land for investment and applying to the responsible authorities (GRZ, 2006). A Lands Working Group was also established, which comprises representatives of ZDA and the Ministry of Lands. Amongst the primary responsibilities of this group is to negotiate with chiefs the inclusion of land in a 'land bank'. A Farm Block Development Programme has also been initiated on the basis of the NAP in 2004. The farm blocks are government initiatives whereby large tracks of land are set aside with requisite infrastructure to facilitate large-scale agricultural investment. The farm blocks consists of a 'core venture', around which small and medium satellite farms would be established to foster integration of smallholder agriculture in supply chains led by large-scale commercial agriculture. By 2010, the government had established nine farm blocks, one in each of the nine provinces, involving a total of 1.002 million hectares (see Table 1).

2.4 Recent trends in large-scale agricultural investments

Zambia's economy has traditionally been dependent on mining, especially copper production. However, agriculture has often been given emphasis by government at various points in the history of the country. In the 1970s, state enterprises dominated the Zambian economy and private sector investments played a minimal role. This trend was initiated by the 1968 economic reforms and institutional changes that favoured increasing state control of the economy. The government of then President Kenneth Kaunda encouraged Zambians to 'go back to the land' and it actively participated in agricultural production and marketing through state-owned farms and the then National Agricultural Marketing Board (NAMBOARD). In this context, the government became the major investor in large-scale agricultural projects.

Table 1. Provincial distribution of farm blocks and land area sizes

Name of farm block	Province	District	Size (hectares)
Nansanga	Central	Serenje	155,000
Kalumwange	Western	Kaoma	100,000
Luena	Luapula	Kawambwa	100,000
Manshya	Northern	Mpika	147,000
Mikelenge/Luma	North-Western	Solwezi	100,000
Musakashi (SADA)	Copperbelt	Mufulira	100,000
Muku	Lusaka	Kafue	100,000
Simango	Southern	Livingstone	100,000
Mwanse-Phangwe	Eastern	Mufulira	100,000
Total land area			1,002,000

Source: OECD/NEPAD (2011).

Both KASCOL and MDC were a consequence of this policy. The major objective for agricultural investments was to 'increase agricultural production to achieve self-sufficiency in staple foods, both nationally and regionally where possible, and provide raw materials for agro-industries' (GRZ, 1979). Because of the need to achieve self-sufficiency in staple foods, the major focus of large-scale agricultural investments was on cereals and livestock production. MDC and a related company which Mpongwe later acquired after government divestiture – Munkumpu Ipumbu Crop Farm and Kampemba Ranch – are examples of such focus. On the other hand, KASCOL is an example of a large-scale agricultural investment aimed at providing raw materials for agro-industries.

The trend of public investments in agricultural land was reversed in the 1990s when Zambia shifted from a characteristically command economy to a market economy. Agricultural policy reforms were undertaken, the main thrust of which was liberalisation of the agricultural sector and the promotion of private sector participation in production and marketing of agricultural inputs and outputs. Enterprises that were fully or partially state-owned were privatised and private investment was encouraged.

MDC, which was jointly owned by the government of Zambia and Commonwealth Development Corporation (CDC), was effectively sold to CDC by way of increasing its shareholding in the company from 50% to 70%. The government reduced its shareholding to 30%, and this equity was meant to be transferred to the Privatization Trust Fund (PTF) for subsequent public floatation. This did not happen and by 2005, CDC had 100% ownership of the company. In a surprising turn of events, though, MDC went into voluntary liquidation in 2006 and its assets were sold to other companies, the prominent one being ETC BioEnergy.

The government's equity stake in KASCOL was partly through the Development Bank of Zambia, and partly through ZSC; when the latter was sold to Tate and Lyle in

1995, KASCOL was effectively privatised. In 2001, ZSC was taken over by South African company Illovo.

The trend of private investments in agriculture has continued in recent years. In the 10-year period starting from 2000 to 2009, total pledged investments in agriculture have been on an upswing, reaching USD 315,027,378 from USD 8,343,207 according to data from the ZDA (see Figure 2).⁵

These figures represent both start-up companies and investments in existing companies and indications are that the majority of the investments are purchases of existing farms. For instance, the data includes the purchase of MDC assets by ETC BioEnergy in 2007 by an investor of Indian origin, with pledged investment of USD 59,648,687. This was the second largest pledge in the agricultural sector in 10 years. It also includes the purchase of Munkumpu Farms, once part of MDC, by Somawhe Estates Ltd, with a pledged investment of USD 14,060,000. Somawhe is owned by a Danish investor.

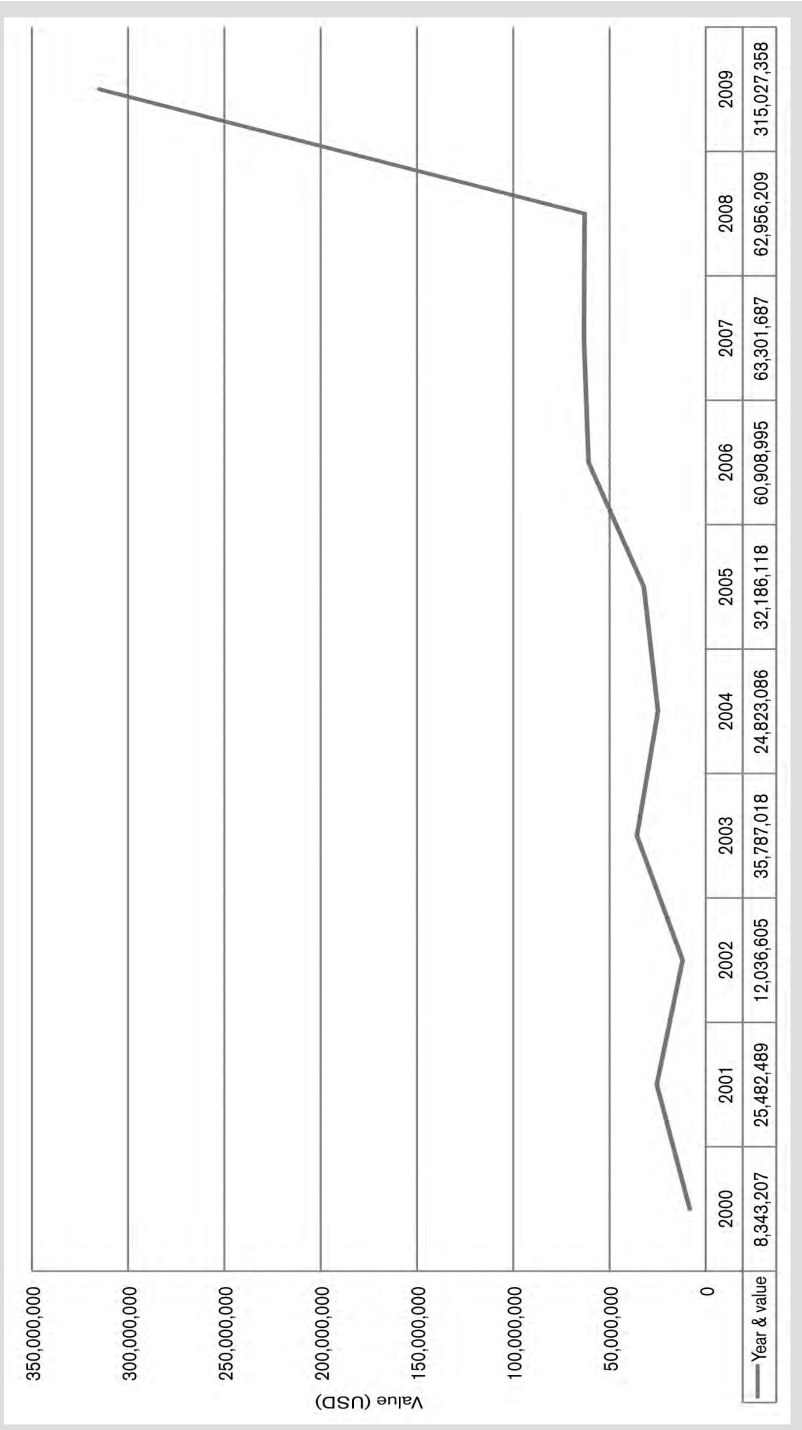
In 2011, ETC BioEnergy sold its farms and associated assets to Zambeef Products Plc at USD 47,390,000. Zambeef Products Plc is a Zambian agribusiness company involved in the production, processing, distribution and retailing of beef, chickens, pork, eggs, milk, dairy products, flour and bread, edible oil and feedstock through its own retailing network throughout Zambia and West Africa. Could this signify a new trend – where foreign-owned companies are bought by locally-owned companies? It is perhaps too early to make a case out of this one isolated incidence.

What is worth noting, however, is that there are exceptions to the apparent trend of new investments being focused on purchases and expansions of existing farms. In a few cases, completely new farms have been started. This, though, has been mostly in the biofuels subsector. These investments were started in earnest a few years ago, fuelled by the rising prices of fossil fuels. Since 2010, however, investments in biofuel crops, especially jatropha, have almost grounded to a halt. This is certainly due to the fall in fossil fuel prices that have made investments in jatropha unattractive. This probably is one reason why ETC BioEnergy sold Mpongwe farms in 2011. ETC BioEnergy planted 500 hectares of jatropha on an estate that was originally being used to grow coffee, and had plans to expand the hectareage under jatropha to 12,000 but this was not to be.

The preference for investing in existing farms may be explained by various factors, among them the high cost of land clearing for virgin land. It is estimated that it costs about USD 900 to clear one hectare of land. At this rate, one needs an investment of close to one million dollars to clear land which is just slightly over a thousand hectares. The other possible reason is that investors may be unwilling to commit investment funds to an untested business concept. Actis, which manages an agribusiness fund targeting Africa, generally focuses on established firms and avoids greenfield start-ups.

5. These figures represent the investments pledged when obtaining investment licenses. The amounts actually invested may be different.

Figure 2. Pledged investments in agriculture (2000-2009)



Data source: Zambia Development Agency.

There could be a third reason: most of the new investments are being made in areas that are generally accessible by road and rail. These are the areas that have traditionally attracted investments in commercial agriculture and even though these areas may have unused land, most such land is owned by commercial entities, even though only a small proportion of that land is being used. This gives room for expansion and modernisation by injecting money into an already existing establishment. Graham Rae, managing director of Zambezi Ranching & Cropping Ltd is reported to have said this: 'When we first moved to Zambia, only 100 hectares of Zambezi Ranching & Cropping Ltd was cultivated but we've changed that (...). We are now cropping 4,000 hectares with room for expansion' (Armitage, 2011). Zambezi Ranching & Cropping Ltd is one of the recent investments in commercial agriculture. Most commercial farmers in Zambia hold undeveloped/underutilised farm land which gives room for expansion should there be an injection of capital (and perceived product demand, of course). KASCOL and Mpongwe farms also have undeveloped land and have thus significant room for expansion.

The farm blocks programme, discussed above, has also promoted investment by Zambian farmers, who have taken up most of the land in the farm blocks. We are yet to see to what extent these farm blocks will be developed into fully-fledged commercial farms.

Additionally, a good number of Zambians in urban areas, awoken by the prospect of being found landless should the current trend of land purchases by commercial entities continue, have obtained tracts of land in villages from their chiefs. Currently, most such land is yet to be put on title. The challenge faced, of course, is obtaining capital to develop such land.

3. Design and implementation of the investment projects

3.1 Origin and overview of the businesses

KASCOL and MDC represent two distinct organisational models. KASCOL combines elements of contract farming, tenancy farming and joint ownership. This configuration has evolved over time, initially starting as contract-tenancy farming and culminating into smallholder outgrower equity ownership. MDC, on the other hand, is a business with a rural development dimension. It is centred on large plantations and neither involves collaboration with smallholders, nor equity ownership by low-income groups. The main development contribution is seen in employment generation in a rural setting, where poverty levels are around 80%; in payment of public revenues; in contributing to the food security of its employees and of urban dwellers in the nearby towns on the Copperbelt Province; and, more generally, in opening up the area to investment in agriculture by demonstrating success and by persuading government to improve infrastructure.

Both the KASCOL and MDC investment projects were conceived of as both a business opportunity through which shareholders would obtain a reasonable return on their investments, and as a development initiative that would help propel the poor in the respective districts out of poverty. The creation of KASCOL was a response to a business opportunity arising from increased demand for sugar and the derived demand for more cane to feed the sugar processing factory at ZSC. The original shareholders that partnered up to establish KASCOL were the Commonwealth Development Corporation (CDC), the Development Bank of Zambia, Barclays Bank Zambia Plc and Zambia Sugar Company (ZSC). The Development Bank of Zambia and Zambia Sugar were at the time both owned by the government, which thus indirectly owned part of KASCOL. Barclays Bank – a purely private, profit-seeking entity – saw an opportunity for commercial returns. CDC and the Development Bank of Zambia had explicit development objectives, which led to the inclusion of the outgrower scheme. CDC and Barclays Bank have since sold their KASCOL shares to Kaleya Smallholder Farmers Association (KASFA) through its investment wing, the Kaleya Smallholders Trust, and to other private shareholders, while ZSC donated its shares to Mazabuka Cane Growers Trust. MDC was set up to exploit a business opportunity arising from the growing demand for agricultural produce in the country and the region. However, to the initial owners of the company (the government of Zambia and CDC), MDC was not only a business opportunity but also a development opportunity, as can be gauged from its name. Unlike KASCOL, MDC involved a direct share ownership by the government of Zambia: the company was originally a joint venture between the Zambian government and CDC. Like KASCOL, the shareholding of MDC has also changed substantially since the company was first set up.

The KASCOL and MDC investment projects reflect a vision of agricultural modernisation through large-scale agricultural enterprises. The two projects were a response to two policy measures: the first was to increase agricultural production to achieve self-sufficiency in staple foods, both nationally and regionally, and provide raw materials for agro-industries; and the second was to create employment and income opportunities in the rural areas in order to counter rural-urban migration (GRZ, 1979). The design of the two investment projects reflects these elements. Both projects are in the agricultural sector and both are rural-based. The central government directly played a role in the formation of both KASCOL and MDC. Firstly, government was a shareholder in both companies. Secondly, the government was involved in the land purchase negotiations in the case of KASCOL, where land was purchased from existing farmers. The government also facilitated the allocation of land by Mpongwe chiefs to MDC. Both KASCOL and MDC were more recently privatised, reflecting a shift in national policy towards liberalisation and privatisation. In the case of KASCOL, privatisation resulted in associations of local farmers to acquire equity stakes in the company.

3.2 The impact of privatisation

The privatisation drive started in 1992 and was conducted within the wider context of economic liberalisation and against a backdrop of apparent economic decline that started in the 1970s, barely a decade after gaining political independence. The main objective of economic liberalisation was to reverse this economic decline. Privatisation was offered as the kingpin of that process. Many state-owned enterprises were privatised. Because one of the immediate objectives of privatisation was to improve efficiency of enterprises, much research has sought to measure the impact of privatisation on firm performance. One of the most rigorous studies is that by Cheelo and Munalula (2005) who, using panel data, took an econometric approach to measuring the impact of privatisation on firm performance. That study found that there were significant differences in the performance of privatised firms before and after privatisation in terms of improvements in operating efficiency, and capital investment, though the influence of liberalisation was more important in determining turnover and profitability performance than change of ownership (i.e., privatisation). The study also found that privatisation had a negative impact on firm employment levels, at least in the short term.

The wave of privatisation included both KASCOL and MDC. The impact of privatisation on KASCOL is not sharply defined because the company was, for all practical purposes, in private hands even before the privatisation programme. The government had no direct equity stake in KASCOL – it was two government-controlled entities (ZSC and the Development Bank of Zambia) that owned a total of 50% of the shares. Thus, when ZSC was privatised, the effect on the operational management of KASCOL was minimal.

The situation was different for MDC. Originally a joint venture between the government of Zambia and CDC, the company was 60% owned by the government of Zambia just before privatisation (Kaunga, undated). After privatisation, there was a significant injection of capital into the company and a major expansion programme got underway: about 5000 hectares were to be cleared, together with major investments in capital equipment. Indications are that MDC was one of the most viable agricultural investments in the CDC portfolio. Anecdotal evidence suggests that by 1996-1997, MDC was more profitable than the then Zambia Consolidated Copper Mines (ZCCM). In terms of employment, there is no evidence that suggests that there was an immediate drop in employment levels following privatisation, perhaps because of the expansion programme that the company had embarked on soon after privatisation which required an increase in manpower levels. In 1996, a number of young university graduates were recruited, mostly in middle management positions. In 1998, MDC was merged with a newly created milling company – Mpongwe Milling – and another CDC-owned farm – Munkumpu-Ipumbu Farm. The merger did not negatively affect employment levels.

However, since the mid-1980s, major changes were instituted in CDC's mandate and philosophy. CDC developed a more commercial approach to its operations, with the aim of creating internationally competitive multinational businesses in the palm oil, sugar and horticultural sub-sectors (Tyler, undated). As a result of this change in strategy, the financial return threshold for remaining in the CDC portfolio was to be raised. A number of assets in CDC's agricultural portfolio were sold between 2000 and 2003 (Tyler, undated), including Nanga Farms and York Farm in Zambia. MDC was unaffected by these divestures, implying that it was not immediately considered for disposal though plans to do so were still in the offing. But the changes within CDC had a ripple effect on MDC and there was much discontent among employees. In 2006, MDC went into voluntary liquidation and its assets were sold off. Two new companies, ETC BioEnergy and Somawhe Estates Ltd, were now the new owners of the farms. Even though ETC BioEnergy pledged to inject capital in the company, employment levels were significantly reduced.

It is difficult to measure the impact of privatisation on the performance of KASCOL and MDC. A World Bank post-privatisation study observed that 'performance by companies purchased through pre-emptive rights sales (usually to foreign investors holding minority shares and a management contract) was unaffected by privatization' (Serlemitsos & Fusco, 2003). This, apparently, was the case for both MDC and KASCOL. There is a significant possibility that liberalisation had a greater impact on company performance than privatisation, at least in the short term. For instance, for MDC, an orientation towards the export market was found to have had a positive effect on company performance (Serlemitsos & Fusco, 2003). On the other hand, liberalisation, by opening up the economy to increased competition, negatively affected the performance of many of the privatised companies that were totally dependent on the local market.

3.3 Financial performance

A detailed assessment of the financial performance of MDC and KASCOL is beyond the scope of this report. However, it may be useful to develop a few considerations. While investments in the agribusiness may be profitable, returns on investment are generally low compared to other sectors of the economy. The low levels of financial returns in the agribusiness sector motivated CDC's divestiture from MDC and many other agribusinesses in Africa. The case of low returns in the agribusiness sector has long been recognised by investors. Tyler (undated), quoting from the 1972 CDC annual report, states that 'many agricultural projects, particularly involving smallholders (...) have had to be ruled out in the past because (...) the overall rate of return is well below that necessary to cover the service of the capital invested'. This makes it a lot harder for the sector to attract private sector investors. Tyler (*ibid.*), quoting from the 2000 CDC annual report, quotes the chairman of CDC as having said the following:

It was with considerable reluctance that the board concluded that many of our agribusiness investments, with which CDC has been proudly associated throughout its history, are unlikely to meet our minimum financial return requirements. We have therefore substantially written down the values attributed to them, to reflect a 'for sale' rather than 'going concern' status.

Gauging from two of the biggest and most successful agribusinesses in Zambia – Zambia Sugar and Zambeef – and which are associated with our case studies, the average return on investment for agribusinesses in Zambia could be around 10% (Table 2). The average return on net assets for Zambeef, the new owners of Mpongwe Farms, was 10.3% for the years 2010 and 2009. Similarly, the average return for Zambia Sugar – the single buyer of KASCOL of cane – was 10% for the years 2010 and 2009. In contrast, the average return for Arcades Development, a newly established shopping mall in Lusaka, averaged 27% for 2010 and 2009.

Table 2. Return on net assets for selected companies

Company	Return on net assets		
	2010	2009	Average
Zambia Sugar Plc	13.1%	7.5%	10.3%
Zambeef Products Plc	14%	6%	10%
Arcades Development Plc	45%	8%	27%

Source: computed from company financial statements.

That said, however, the individual, yearly returns are not far from other businesses. The returns, for instance, compare favourably with the returns on the CDC portfolio for the years 2007 and 2006, which posted returns on net assets of 14% and 12%, respectively. It would appear, though, that returns from agribusinesses are subject to wide variations, probably a reflection of the sensitivity of agribusiness, especially agricultural commodities, to both local and global economic conditions.

In the case of ETC, company management believes the company is making a sufficient return on investment to satisfy the shareholders. Even though MDC went into liquidation in 2006, it was neither a loss maker nor facing liquidity problems – it was liquidated because it could not meet the higher targets of return on investments demanded by its owners, CDC.

Also, there is a likelihood of a sustained rise in returns in agribusiness given the rising trend in global food prices. Increased demand for food is expected to increase even as world population increases and countries like Zambia that still have arable land may reap high returns from investments in agriculture.

Poor infrastructure in most parts of the country increases the operating costs of agricultural ventures that operate in remote areas. Investors who choose to invest in such places are often forced to make additional investments in assets that are not directly related to their core business. MDC, for example, had to invest in road maintenance and telecommunications equipment and such investments have a depressing effect on return on investment. Also, in the 1990s MDC had high vehicle maintenance costs due to the bad road leading to the nearest town, Luanshya.

3.4 The economic inclusion of local low-income people in the investment projects

This section discusses the economic inclusion of low-income people in the investment projects. The discussion is centred on the concept of inclusive business models.

According to UNDP, an inclusive business model includes 'people with low incomes on the demand side as clients and customers, and/or on the supply side as employees, producers and business owners at various points in the value chain' (UNDP, 2010). The goal of an inclusive business is neither philanthropic nor pure corporate social responsibility, but pursuance of a business opportunity in a low-income market in such a way as to meaningfully provide tangible benefits to the low-income sections of society, while making sufficient returns to justify the investment. It is helpful to assess the degree and quality of inclusion of low-income groups in a business by considering four factors: ownership (that is, ownership of the business and control over key assets like land or processing facilities), voice (that is, participation in the management of the enterprise), risk (the sharing of production, marketing and other risks), and reward (the distribution of the costs and benefits generated by the project) (Vermeulen & Cotula, 2010).

Ownership

The ownership structures of both KASCOL and MDC present similarities and differences. Both companies started with similar owners. KASCOL was originally indirectly owned by the government of Zambia (through ZSC, a then state-owned

enterprise which owned 25% shares in KASCOL; and through the Development Bank of Zambia, a development finance institution established in the early 1970s by an Act of Parliament), CDC and Barclays Bank. MDC was owned by the government of Zambia and CDC, with each having a 50% share in the early stages of the company's development. As discussed, the substantial government involvement reflects the prevailing government policy at the time the companies were established.

CDC's involvement shows that both companies were, to an extent, formed to contribute to national economic growth and poverty reduction. CDC is the UK government's development finance institution, and is currently established as a company owned by the Department for International Development (DFID). While, as discussed, CDC's strategy has changed over the years, the company has had an economic development agenda for poor countries since its establishment in 1948. It is understood that one of the objectives of CDC at the time of investments was to ultimately divest of its investments in the companies once they had matured enough to serve their development role without CDC's continued support. For instance, in a 1995 press release by the Zambia Privatization Agency announcing the acquisition of Munkumpu Farm and Kampemba Ranch by the CDC, this objective was explicitly stated (ZPA, undated). And CDC eventually divested from both KASCOL and MDC.

As discussed, the ownership structure has much changed for both KASCOL and MDC. CDC and Barclays divested from KASCOL, selling their shares on the market. The outgrowers' association (KASFA) bought some 13% of these shares through a bank loan. So outgrowers engaged in the outgrower scheme have an equity stake in KASCOL. This is an important difference compared to MDC, where people with low incomes have no equity stake in the company. KASFA holds its shares through a Trust – the Kaleya Smallholders Trust. Kaleya Smallholders Trust is part of a consortium known as View Point Investment Holdings. In addition to the trust, the consortium also includes two companies: Nzimbe Ltd and KASCOL Consultants. Collectively, the three members of the consortium hold 50% of the shares in KASCOL, which were sold by CDC and Barclays Bank. Development Bank of Zambia has maintained its 25% equity stake.

The remaining 25% of KASCOL shares are held by the Mazabuka Cane Growers Trust, an association of cane growers who supply cane to ZSC. The Mazabuka Cane Growers Trust assists cane growers in Mazabuka District to improve cane production and productivity. It acquired its equity stake in KASCOL through a donation from ZSC, which previously owned this equity stake. The donation was probably intended to ensure close collaboration with cane suppliers and thus assure continuity of supply of cane to the sugar factory. The effect of the 25% stake held by the Mazabuka Cane Growers Trust and of the 13% stake held by the Kaleya Smallholders Trust is that bodies representing local farmers own a substantial share of KASCOL. The demand for cane by the Zambia Sugar factory is big enough to take in all the cane supplied by the cane growers in Mazabuka and as such, relations

Table 3. Equity structure in KASCOL

Shareholder	Equity
Development Bank of Zambia	25%
Mazabuka Cane Growers Trust	25%
Kaleya Smallholders Trust	13.26%
View Point Investment Holdings	36.74%

among suppliers (for instance, between KASCOL outgrowers and other cane growers in the district) are virtually non-competitive. However, having a single buyer of cane may work to the disadvantage of the cane suppliers (going by Michael Porter's oft-cited model of competitive forces). The current shareholding structure of KASCOL is summarised in Table 3.

Other important 'ownership' issues include control over land and key project assets like processing facilities. KASCOL holds land on the basis of a 99-year lease. The land lease is comprised of three farm blocks, which are then sub-leased to 160 outgrowers through a 14-year sub-lease. Of the 4314.9 hectares of land held by KASCOL through a long-term lease, about 1000ha are subleased to outgrowers. Each smallholder has, on average, 6.5ha of cane field and an additional area of approximately 0.5–1ha of dwelling space on which to build the houses and produce food for their own consumption and generate income. Box 2 explains the tenure arrangements for the outgrowers.

Only about half of the total land leased to KASCOL is under cultivation. Part of the land is rocky and therefore not suitable for cultivation. More importantly, KASCOL sources suggest that irrigation water availability is the main constant to how much land can be brought under cultivation. According to key informant interviews, KASCOL has been flexible with the utilisation of the company's marginal lands that are yet to be brought under cane cultivation. Since most of the marginal land is already cleared, it is not used for the collection of non-timber forest products by the local communities, KASCOL staff or outgrowers. Instead, KASCOL has allocated it to outgrowers and members of staff to temporarily use this land for growing staple food crops like maize to meet household food security objectives. However, towards the end of 2011, KASCOL had issued a notice that three areas that were under food crop cultivation by outgrowers or its staff members would be prepared for cane cultivation as part of the company plantation, thereby removing this access to land for domestic food production.

Processing facilities (a sugar processing plant located within a 15km radius of the farm) are owned to ZSC, to which KASCOL sells its entire produce – including both sugarcane produced on its own estate and the cane that KASCOL sources from the outgrowers. The outgrowers do not deal directly with ZSC because the transactions costs would be higher on the part of ZSC if it opted for that approach, and also because the smallholder outgrowers produce on contract with KASCOL.

Box 2. Land tenure security under the sub-lease arrangements

Farmers do not pay ground rent to KASCOL for their sub-lease. Each smallholder signs a 'Cane Farmer Agreement', a legally binding contract between KASCOL and outgrowers, which stipulates roles, responsibilities and obligations of each party. The agreement stipulates that any improvements on the outgrowers' land or production-related decisions must be agreed upon between the farmers and KASCOL. This arrangement has established a form of co-management of the land. Farmers are free to make improvements on the 0.5-1 ha of land within the provisions of the Cane Farmer Agreement. The agreement also provides for full compensation at market value for all improvements on this land (as well as the standing cane on the 6.5ha) in the event that the contract is terminated. The Cane Farmer Agreement further provides a succession clause, which allows outgrower farmers to nominate a family member who succeeds the sub-lease in the event of their death or infirmity. The next of kin who may be a surviving spouse, child or other family member undergoes probation for a period ranging from one to two years. At the end of the probationary period, the successor's continued participation must be approved by KASCOL.

Interviews with KASCOL's Smallholder Relations Officer revealed that although outgrowers enjoy relatively secure 14-year leasehold tenure arrangements, there have been a few cases of farmers being evicted based on non-compliance with the terms of the Cane Farmer Agreement. There are four possible contexts in which termination of the agreement may take place, namely:

- if the farmer is declared bankrupt
- upon the death of a scheme member, where the nominated person to continue with the scheme does not satisfactorily qualify to carry over the activities
- in the event that the person so nominated to succeed the original member does not meet the minimum criteria to be approved by KASCOL after undergoing a probationary period of between one and two years
- in the event of failure to comply with the provisions under the disciplinary code.

Under the disciplinary code, farmers can be evicted for: performing below expectations over a period of three seasons that are consistently at 25% or more, which is operationally defined as getting cane yields below 75% of the highest achiever in the respective farm block purely on grounds of bad management practices; absence from the scheme for at least 30 days without obtaining prior permission or authorisation from KASCOL; bringing the name of KASCOL in disrepute through issuance of press statements, or theft of agricultural inputs; and involvement in illegal activities such as brewing of illicit beer. Farmers may also resign from the scheme, in which case the agreement would be terminated.

Records indicate that since the inception of the scheme in 1983, there have been 16 evictions and three resignations. However, two of those that had been evicted for failing to manage their field have been reinstated upon winning an appeal. Individual interviews revealed that in 1986 the first five farmers left the scheme. Four of these were evicted for abrogating the tenancy agreement while one left through a resignation. Between 1993 and 1996, KASCOL evicted a total of eight farmers for reasons ranging from failure to manage their fields, misrepresenting the company and involvement in brewing and sale of illicit beer. Finally, between 1997 and 2005, when the number of farmers stabilised at 160, two evictions and two resignations were recorded by KASCOL. Amongst the evictions, one was motivated by failure to manage the cane fields, while the other was on grounds of having been absent from the scheme for more than 30 days.

Voice

Participation in the management of an enterprise is related to the amount of control and influence that an individual or group has on the strategic and/or operational decisions of the enterprise. The amount of control that outgrowers and other low-income people have in an enterprise is related to the role they play in the value chain – whether they are shareholders, suppliers/producers, employees or customers, and how critical the company perceives their role to be in its survival.

At KASCOL, low-income groups participate in the value creation process as shareholders, suppliers/producers and employees. They are represented at the KASCOL board level, where the chairperson of KASFA is a member. The board is the highest decision-making organ of KASCOL. KASFA is a producer association which seeks to assist farmers in issues of production and outgrower social welfare. The association has an executive committee of nine members; only one of the committee members is a woman. Sources within the outgrower group indicated that their representation on the board was not as effective as they would have wanted it to be, particularly in matters regarding the sharing of rewards from cane produced by the outgrowers. Most outgrowers interviewed during the fieldwork believed that the share of the outgrower gross sales which goes to the company is more than its fair share of the proceeds. Since the Mazabuka Cane Growers Trust is also represented on the KASCOL board, the interests of outgrowers would be expected to be taken care of in an effective way. But this is not necessarily the case, as the other members of the Mazabuka Cane Growers Association are independent commercial farmers who deal directly with ZSC (the buyer). Women's representation on the company board, at the KASFA executive committee and at senior and middle management levels in KASCOL, is marginal. This low participation means that women have a weaker voice to influence recruitment policies either at board, senior management or KASFA levels.

Apart from board representation, smallholder outgrowers are not ordinarily involved in the day-to-day running of KASCOL, except during the tendering process when the company is deciding to procure major inputs for use on smallholder outgrower farms. To facilitate collaboration between smallholder outgrowers and company management on a more regular basis than would be warranted by the involvement of the board member, a Smallholder Relations Officer, who is a full-time employee of KASCOL, is engaged for that purpose. He is the link between smallholders and the company.

The case of KASCOL is that of many suppliers and a single buyer. There is only one buyer of cane in Mazabuka – that is, Zambia Sugar. This has created imbalanced power relations in the supply chain. The suppliers of cane are dependent on Zambia Sugar, which can dictate the price of cane supplied by cane growers. Outgrowers at KASCOL complained that they were given the price at which their cane is sold and have no say in the setting of that price. The Established Recoverable Crystals (ERC) committee is the main mechanism by which cane growers in Mazabuka negotiate with Zambia Sugar. The ERC is related to the sucrose content of the cane and mill

efficiency. KASCOL and KASFA as well as independent cane growers sit on this committee and the price set is the one at which KASCOL sells KASFA members' cane.

In contrast to KASCOL, low-income people at MDC are not represented on the company's board and they hardly participate in determining the direction of the company – their role is confined to that of employees, with practically all of them being in non-management positions.

Thus, it would appear that the low-income people have a greater voice in KASCOL, where they participate as producers, shareholders and employees, than in MDC where they only participate as employees. Even though the low-income at KASCOL are not directly involved in the day-to-day management of the company, they have an influence in the choice of senior managers due to their representation at board level, taking into account however the limitations noted above on the extent of the effectiveness of this representation. In addition, KASCOL is heavily dependent on outgrowers, as these produce close to 50% of the sugarcane that the company sells to ZSC. This circumstance would be expected to increase the leverage of the outgrowers.

Risk

Risk relates to possibility of loss of assets or income-earning potential. It is related to the contribution one makes in the value creation process and the value of rewards derived from participating in value-creation. Again, the contribution in the value-creation process is dependent on the role one plays in the value-chain – that is, whether a shareholder, supplier/producer, employee or customer. In KASCOL, low-income groups participate as producers, shareholders and employees. Therefore, the risk they bear is higher than in the case of MDC, where they only participate as employees. In KASCOL, smallholder outgrowers face the risk of loss of assets and income-earning potential. In MDC, low-income groups face the risk of loss of income earned through wage employment. The severity of loss, and the probability of it occurring, influence the decision whether or not to put in place a risk management system. In KASCOL, where the severity of loss seems higher, smallholder outgrowers, in conjunction with KASCOL management, have put in place a risk management system: crop insurance. KASCOL has taken a single crop insurance policy for the whole sugar estate, which includes the fields of smallholder outgrowers, in its name. The smallholder outgrowers pay for the insurance by allowing KASCOL to deduct a small percentage of money from their cane sale proceeds. In MDC, there is no such insurance designed specifically to protect the assets of the low-income, except the legal requirement of facilitating the remittance of statutory contributions to employee pension schemes, which KASCOL also does. According to the Pension Scheme Regulation (Amendment) Act No. 27 of 2005, a pension scheme means any scheme or arrangement, other than a contract for life assurance, whether established by a written law for the time being in force or by any other instrument, under which persons are entitled to benefits in the form of payments, determined by age, length of service, amount of earnings or otherwise and

payment primarily upon retirement, or upon death, termination of service, or upon the occurrence of such other event as may be specified in such written law or other instrument. The pension schemes are thus safeguards against loss of income arising from retirement, job loss or death (in which case the beneficiary will be the surviving relatives). They do not safeguard against reduction in wages. MDC has also taken crop insurance policies for its crop.

Reward

In an equitable system, rewards, like risks, are related to one's contribution in the value creation process. In practice, the value of economic rewards depends on various factors, including the forces of demand and supply for the factors of production contributed and the products produced. The KASCOL investment project is an interesting case as low-income groups participate as shareholders, producers and employees. The income of outgrowers inevitably varies with sugarcane output and prices. All the sugarcane is sold to Zambia Sugar via KASCOL. The price is set by Zambia Sugar, which takes into account several factors including the demand for sugar on the local and international market. The current revenue distribution arrangement between KASCOL and outgrowers is 55 to 45%. This means that each farmer is entitled to 45% of the revenue realised from the sale of cane to ZSC, while KASCOL is entitled to the remaining 55%. Equally, each outgrower is expected to meet 45% of the total cost of planting, irrigating, weeding, harvesting, including transportation of cane to the mill through the buyer credit. Despite variation between years, the annual incomes of outgrowers are generally higher than their counterparts who are engaged as employees. On average, an outgrower gets a net income of up to ZMK 15,000,000 (USD 3167.40) per year from a good harvest of cane, while the average annual wage income of a unionised employee at KASCOL is currently around ZMK 3,657,120 (USD 772.24).⁶ In addition, through their equity participation, the outgrowers are entitled to a dividend whenever the company declares it. So far, the dividends have been used to pay back the loan obtained from a commercial bank to buy shares from CDC and Barclays Bank. The loan is likely to be cleared within three years.

It would also appear that outgrowers are wealthier than employees. Observations were that outgrowers had more assets (e.g., some had cars) than those who were working for a salary. This excludes those in management positions. And apart from tangible economic rewards, psychological rewards also seem important and these depend on an individual's perceptions and values. Those individuals who value independence would rather be outgrowers producing for the company than employees. Currently, no outgrower is also a KASCOL employee. Some of the outgrowers were former employees who chose to become outgrowers. Those who remain in employment are presumably individuals who prefer the certainty and regularity of wage income – or people who cannot afford to become outgrowers.

6. The research team could not obtain salary scales for non-unionised permanent workers who, in both companies, are regarded as management staff. Those interviewed could not disclose this information.

4. Socio-economic outcomes

Whilst the socio-economic outcomes of the two projects are difficult to determine due to the problem of attribution and to constrained data availability, there is evidence that the companies have had some impacts on the poor and their environment, some positive, and some negative. In what follows, we begin by considering the situation prior to the investments and then contrast this with the socio-economic outcomes of the investments.

4.1 The situation prior to the investments

It is impossible to do a proper assessment of the development context in the project areas at the time of project inception. Too long a time has passed since then, and data on key socio-economic indicators is in scarce supply. However, it is possible to make some general observations.

In the mid-1970s, when the negotiations for the acquisitions of land for agricultural investments were being made, Zambia was a young nation, barely 10 years old as an independent state. One of the major challenges faced was human capital. The country had very few schools. By 1976, it had 2743 primary schools (most of these just went up to the fourth grade) and 121 secondary schools. College education was scarce. In 1976, Zambia had 13 teacher training colleges, 14 technical and vocational training colleges and 1 university which had opened 10 years earlier (1966). Mpongwe District (then part of Ndola Rural District) at that time had about 9 primary schools while Mazabuka District had about 39 schools (GRZ, 2002a). However, compared to Mpongwe and many other rural districts, Mazabuka District (where KASCOL is located) was much better off. Mazabuka's location along the main (and the country's first) line of rail attracted missionaries and white settlers (mainly as commercial farmers) and, as such, the KASCOL project catchment area benefited from earlier investments in human capital projects undertaken by government, missionaries and commercial establishments (ZSC, for instance). By 1980, a number of schools existed in the project catchment area at both primary and secondary school levels. These included Mazabuka Basic School, Saint Columbus Primary School, Kaonga Primary School, Saint Edmonds Secondary School, and Mazabuka Girls High School. Vocational training centres, however, were very few, and perhaps only the Zambia Institute for Animal Husbandry was within the project area. A farmer-training centre that catered for the needs of the entire Mazabuka District existed about 60km away, though the distance meant that it was of limited use to the farmers in the project area.

The vast majority of the rural population in the project catchment areas most likely made a living through subsistence farming and herding. To date, about 90% of Zambians who live in rural areas derive their livelihoods from agriculture (CSO, 2003). Only 6.3% of the rural population is in wage employment, implying that

93.7% are most likely engaged in independent agricultural activities, whether for subsistence or for commercial production.

While formal employment opportunities existed for work in government offices (both central and local) and in parastatals that were being established by the government in the first decade after independence, few rural people, who were the majority of residents in the catchment areas of the two case studies, could get such jobs due to lack of education and training. Most, therefore, could only work as 'labourers', a term used to refer to unskilled labour in Zambia. In Mazabuka District, where KASCOL is located, some farming enterprises, notably ZSC, had just been established. These enterprises provided whatever type of employment that local residents could pick up (cane cutting, office cleaning, etc.). Management jobs and other jobs requiring technical expertise were mostly in the hands of expatriates. Mpongwe District had even fewer, if any, opportunities for wage employment.

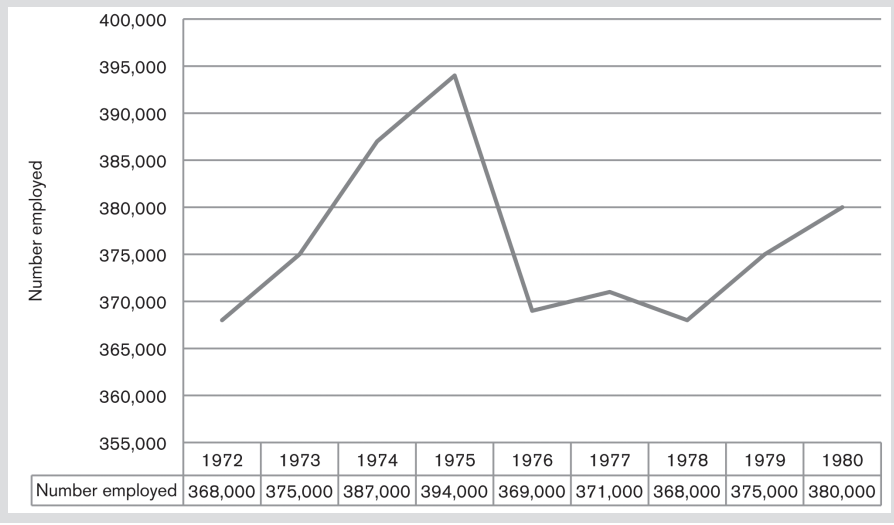
The employment situation was particularly bad in the second decade after independence, for although Zambia recorded growth in wage employment due to growth in the economy in the first 10 years after independence (1964-1973), from the mid-1970s growth in wage employment grew less than growth in the labour force (CSO, 1986) (see Figure 3). This period marked the beginning of Zambia's economic decline, largely due to the decline in copper prices on the world market, increased oil prices and policy mishaps.

4.2 Direct livelihood contributions

According to Scoones (1998), 'a livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living'. The same author adds further that 'a livelihood is sustainable when it can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, while not undermining the natural resource base'. The terms livelihoods and employment are inexorably intertwined and according to the Zambia Labor Force Survey (1986) a 'person is employed if he performs some work for pay, profit or family gain', and this includes subsistence farming. Thus, employment can include a wage for the employed person or independent production of a product for direct consumption or market sales (Scoones, 1998).

Wage employment

One of the policy objectives at the time KASCOL and MDC were being set up was to create employment and income opportunities in the rural areas; both companies were seen as an operationalisation of this policy. Today, KASCOL is one of the largest employers in Mazabuka District and Mpongwe is the biggest employer in Mpongwe District. When the project started in the 1980s, KASCOL had over 300 permanent staff – both management and non-management. By 1999, the number had dropped to 78 and this has been maintained to the present. The drop in the number of employees came with changes in ownership structure. The company

Figure 3. Wage employment in Zambia (1972-1980)

Source: CSO (1986).

underwent a restructuring process which led to over half of the employees being laid off and salaries being reduced for those who remained. Today, KASCOL employs or has contract farming relations with a total of 488 people including: 29 employees on fixed-term contracts, who are essentially management staff; 299 seasonal workers,⁷ mainly working as cane cutters and general field workers, who are unionised employees under the National Plantation Workers Union (NAPWU); and 160 outgrowers. At the time of research, 20% of the labourers were women, while women represented 28% of outgrowers. On KASCOL's own estate, the ratio of workers to area cultivated in hectares is about 0.38, or 38 workers per 100ha. While some stages of agricultural production are mechanised, approximately 80% of the production value chain is not mechanised and is thus labour intensive, i.e., heavily reliant on human power. The company has opted to apply more labour intensive production techniques despite the fact that it has capacity to fully mechanise most of its supply chain activities. The seasonal workers undertake much of the non-mechanised farming. They are employed for between 6 to 10 months in a year. In addition, KASCOL has entered a standing contract with KASFA, the outgrower association, regarding cutting or harvesting of sugarcane.

Some 1000 people work as casual labourers with the outgrowers on their fields, though it was impossible to arrive at an exact figure of indirect jobs created by the scheme due to the informal nature of recruitment. This suggests that the outgrowers' farms are much more labour intensive than the KASCOL estate. Finally, apart from those who work directly on the farm, KASCOL also runs a clinic which employs four staff.

7. This is the number on the books at the time of the research. When the team revisited the company in May 2012, casual labour force was down to 170 male workers.

Table 4. KASCOL employment by gender (2011)

Category	Total	Men	Women	Women (%)
Fixed-term contract	29	21	8	28%
Seasonal workers	299	248	51	17%
Outgrowers	160	115	45	28%
Casual wage employees/apprentices hired by the outgrowers ⁸	1031	608	423	41%
Overall	1519	992	527	35%

Source: fieldwork and KASCOL, HR Office/Farmer Liaison Office.

ETC employs four categories of employees: full-time employees; fixed-term contract employees; seasonal employees; and casual labourers. From 2004 to 2011, the venture maintained an average of 600 full-time workers. This currently stands at 692 on a full-time basis (that is, on a fixed pensionable contract). These constitute full-time employees and fixed-term contract employees. In addition, the company employs some 1000 seasonal workers every year. At the time of interviews (July 2011), the company had 520 permanent staff and 1200 seasonal workers. The total number of full-time and seasonal employees translates to roughly 40% of all salaried employees in the district in the 2000s.

Like for KASCOL, the full time employees are those engaged in occupations other than agronomic or direct farming activities – in other words, those in management positions. Some of these workers, however, are technicians that provide support to farming-related infrastructure such as maintenance of irrigation and ploughing equipment. Yet others are drivers. The seasonal workers are directly engaged in farming activities. Women constitute an average of 30% of the seasonal workers and about 14% of those in the fixed-term and senior management employment categories. The employees who are below 35 years of age constitute less than 10% of all those in the non-unionised staff. Jobs and trainings for women are largely concentrated in nursing, teaching, secretarial or administrative jobs, though according to company sources, ETC has a policy to encourage female employees in non-traditional positions.⁹ The figure in terms of workers per cultivated land in hectares is 0.14 or 14 workers per 100ha, significantly lower than that of KASCOL. The difference is most likely a reflection of the difference in the levels of mechanisation in the two companies: MDC is more highly mechanised than KASCOL. With the exception of the recently introduced jatropha farming, the production of all MDC crops is highly mechanised. Jatropha, on the other hand, is very labour intensive. While land preparation is largely done with a tractor, labour is still required for clearing the site, ploughing, planting, weeding, irrigating, spraying crop protection chemicals, fertilising, pruning, and harvesting the final stage of farming the crop. The bulk of the seasonal workers (some 800 people) are engaged

8. Estimates based on fieldwork data concerning interviewed outgrowers.

9. Although this was the view of HR management, there was no evidence that a written company policy existed.

in jatropha farming. So whilst maize and soya beans constituted more than 85% of cultivable land, they employed less than 25% of the seasonal workers.

These figures are significant within the Zambian context. A recent survey of Zambian businesses sponsored by the World Bank and others (Clarke *et al.*, 2010) found that 'even large Zambian enterprises are small by international standards. Close to half have between 51 and 70 employees – just above the notional cut off size of 50 employees for medium-sized enterprises.' Thus, a company like MDC, which employs over 500 persons in a year, is, by Zambian standards, a large employer. This is especially true if such a company is in a rural area – such is the case for the two businesses studied.

That said, the level of job creation appears small compared to the size of the rural labour force. In 2000, Zambia had a total labour force of 3,165,151 persons, of which 2,151,776 were in rural areas (CSO, 2003). The rural labour force was 64% of the total labour force, implying that Zambia's labour force was (and still is) predominantly rural. Of the rural labour force, only 6.3% (about 133,205 persons) were in wage employment.

In 2005 (the year in which comparable national data on wages is available), unionised workers at KASCOL were getting a minimum of ZMK 704,711 (USD 206.28) per month, while seasonal workers were getting a minimum of ZMK 15,816 (USD 4.63) per day.¹⁰ In the same year, the average wage of an unskilled, unionised worker at MDC was ZMK 300,000 (USD 87.81) per month. For instance Brian, who in 2005 was working as a centre pivot irrigation equipment operator at MDC, was earning ZMK 370,000 (USD 108.30) per month, while Peter who worked as a security guard was earning ZMK 300,000 (USD 87.81) per month. These figures are higher than the national average figure of ZMK 293,621 (USD 85.95) per month for all salaried workers in 2005, and much higher than the national average figure of ZMK 105,426 (USD 30.86) for those employed in the agricultural sector, though farm labourers would be expected to have lower pay. Currently, unionised workers at KASCOL get a minimum of ZMK 15,238 (USD 3.22) per day, which is about ZMK 304,760 (USD 64.35) per month, less than half what they used to get in 2005.¹¹ Management explained that this major reduction in salaries was due to a move from an enterprise-based salary scale to an industry-wide scale. An enterprise-based salary scale is negotiated at an enterprise level, while an industry-wide salary scale is negotiated and set at an industry level. Similar salaries are paid at ETC BioEnergy, where seasonal workers receive a monthly salary of about USD 60.

Perceptions among ETC employees and their families are that salaries are generally low. Most of the fringe benefits that workers used to enjoy under MDC, such as free 'mealie-meals', education grants and free medical care were also either withdrawn or frozen. Although the user fee for basic education under the company's school was highly subsidised and parents were only expected to pay Parent Teachers

10. Exchange rate of ZMK 3,416.34 to USD 1 (Bank of Zambia, average 2005 rate).

11. Exchange rate of ZMK 4,735.74 to USD 1 (Bank of Zambia, average 2010 rate).

Association funds, in practice this amounted to a reduction in real incomes accruing to an employee. Here are four testimonies by wives of employees from the workers' residences:

The salaries our husbands are paid are very low. So it is generally difficult for us to survive to the next month end. Although we enjoy free housing, water at our doorstep and electricity, it is tough to get children to schools, especially secondary. My husband is an auto electrician and has been with the company when it was still CDC 19 years ago. But his salary is around K400,000 (\$80). So we normally spend this money before we even see it. We often resort to loan sharks from the shanty township you saw outside there.

My second born is in secondary school but the fees are really taxing for us. In those days MDC used to contribute to school fees, around K150,000 (\$30) for secondary pupils depending on one's job grade. But this is all gone now. In MDC people used to be paid overtime but now this does not happen. Many people receive K500,000 (\$100). If one is paid K700,000 (\$140), he or she must be a supervisor riding a motorbike. No one here gets more than K1,000,000 (\$200) a month except those bosses that drive vehicles.

[In MDC] the salaries were split into two, mid-month and month-end so we never felt the pressure to borrow from the loan sharks.

Yes, in MDC life was much better. We used to get mid-month salaries and then at the month end we would receive the remaining salary. In addition, we used to be given 2 x 50kg of mealie meal every month. The clinic was free and women used to run clubs.

In addition to salary, social security benefits are an important part of employment conditions. Employees in management positions at KASCOL enjoy considerable social security benefits. All the 29 employees on a fixed-term contract are eligible for pension under the National Pension Scheme Authority (NAPSA); are insured against accidental death and disability with Madison Insurance; and are also registered members of the Workers Compensation Fund. Apart from being on social security, all fixed-term employees of KASCOL are entitled to gratuity at 15-18% of their gross annual earnings. KASCOL further implements a favourable Chronic Illness Policy for its employees. An employee who falls chronically ill up to 180 days or six months, is entitled to a full paid sick leave, while if the employee is chronically ill and unable to resume duties, the company continues to pay a salary for another 90 days after which management is required to refer the matter to the Medical Board which is chaired by the Permanent Secretary for Ministry of Health for further guidance. In the event that an employee has to be discharged on medical grounds, the company treats this as normal retirement and he or she is fully compensated. Similarly, employees of ETC are entitled to subsidised housing, free water and electricity. Additional benefits are detailed in Box 3. Nearly all of ETC employees are resident on the farm land, but unlike KASCOL, ETC does not provide land for production of food for own consumption.

Box 3. ETC employee benefits

ETC 'full-time' employees were eligible for gratuity of between 15 and 16% of their annual gross pay, although under the new company, Zambeef, this has been reduced to 10%. In addition, they are eligible for the NAPSA. They are also entitled to 2 days annual leave each month completed of service. Employees paid daily are entitled to 1 calendar month leave after 6 months of continuous service. Besides their normal leave days, permanent or full-time employees are further entitled to 90 days of fully paid sick leave, and an additional 90 days on half-pay, after which they are eligible for medical discharge after seeking medical guidance. According to the Company's HR Department, a medical discharge is treated as normal retirement and there is a deliberate policy of no discrimination against employees on the basis of their HIV/AIDS status and health which is not as a result of neglect by an employee.

In addition, the collective agreement stipulates that permanent and fixed-term contract employees are eligible for special or compassionate leave of between 5 to 7 days in the event of the death of a father, mother, registered spouse or biological children under the age of 18 years. The actual days allocated vary with the distance where the funeral has taken place. If the funeral is within a radius of 160km employees are eligible for 5 days special leave while if the funeral takes place outside the 160km radius, 7 days are allocated. Additional days may also be allocated to an employee at the discretion of management upon written proof. In the event of death, the company further provides ZMK 200,000 (USD 40) for transport, ZMK 170,000 (USD 34) for coffin and ZMK 150,000 (USD 30) for food. Further, employees who are undergoing certain training programmes are also entitled to 4 days study leave to assist them to sit for their exams. Discussions with the HR and Accounts Departments reveal that there is no gender or age-based variations or discrimination in accessing these social benefits, although poor employees under the seasonal work categories are not eligible for any additional social security benefits.

Female employees of the company who have been in employment for a continuous period of 24 months are eligible for 90 days maternity leave on full pay (120 under Zambeef). However, if a female employee has not clocked 24 months in employment and falls pregnant, she is only entitled to 90 days unpaid maternity leave. Three examples of this unpaid leave being granted were given. A further 24 months have to elapse before an employee can qualify for a subsequent paid maternity leave. Both male and female employees are eligible for a maximum of 30 days either to nurse a registered biological child or a registered wife or husband on condition of a hospital admission report. Beyond 30 days, unpaid leave can be applied for. Previously, the employees were eligible for life assurance which was 33 times one's basic pay.

Seasonal wage workers are not eligible for social security benefits such as maternity leave, compassionate leave, education support, free water, housing, electricity and access to subsidised health care. Some limited benefits may still apply, however. For example, ETC seasonal workers are eligible for a maximum of five days paid leave while casuals are entitled to five days unpaid leave. This creates some constraints on women's access to seasonal work due to their triple work burden. Death, illness, pregnancy and other community responsibilities for women often lead to a loss of income as they are expected to attend to reproductive and other care

responsibilities. They are also not provided with any formal tertiary training beyond skills they gain on the job.

As discussed, KASCOL seasonal workers are employed for between 6 and 10 months every year. This means that, for between 2 to 6 months, these workers do not receive income from KASCOL. Focus group discussions with seasonal workers suggested that their general quality of livelihoods deteriorates during these times. Also, the seasonal employees are not eligible for any pension or other voluntary insurance schemes. KASCOL does however adhere to strict occupational health and safety standards, as the company is regularly audited by third-party environmental and labour standard compliance auditors through its fair trade certification.

In the KASCOL case, outgrowers also employ casual labour. An estimated 20% of these workers constitute unpaid family workers among women outgrowers, while the average for the male farmers was 50%. The unpaid workers are usually adult dependants who are not necessarily on a fixed salary, although their personal needs are usually catered for by the heads of households. Hired labourers are paid a wage,¹² but do not enjoy any of the security and welfare benefits such as housing, pensions, and medical or disability insurance. While KASCOL workers are largely unionised, individuals interviewed for this research indicated that, for ETC employees, union activities were banned and anyone found championing the cause of workers would risk a summary dismissal. This would contrast with the fact that Zambia's labour laws guarantee workers a right to association and information on anti-discrimination policies. An interviewee claimed that:

ETC banned the union and no one would speak on behalf of employees. Workers are dismissed without any compensation. Any minor disciplinary action warrants summary dismissal. This needs to change. When an employee is dismissed, he is just given 24 hours to vacate his house and has to sell some households property to repatriate his or her family.

For both KASCOL and MDC, management jobs are predominantly held by individuals who come from outside the surrounding communities, while low-skills jobs are held by locals. In the case of seasonal labour, the demand for labour may be too high for the surrounding communities to meet and the two companies have often obtained such labour from outside their respective districts. At KASCOL, most of the seasonal workers (cane cutters) were migrant labourers from other parts of the country, Western Province in particular. This had been the trend from project inception as locals (Mazabuka residents) who are traditionally cattle keepers have often viewed cane cutting as an unattractive employment option. With the depletion of cattle stocks due to disease outbreaks, however, a number of locals have also started seeking seasonal employment as cane cutters.

Much of ETC's workforce, including the seasonal wage workers, was recruited from other provinces and districts. Less than 25% of the workforce was employed from the surrounding villages. More than 75% of the seasonal workers are recruited from

12. This wage is kept above the minimum wage as required to maintain fair trade certification.

far flung areas such as Lukulu and Mongu in Western Province, Kasempa in North-Western Province and Luanshya. This is attributed by the company to a lack of adequate labour from within the area. People from the surrounding communities who are likely to engage in wage employment said that they find the wages unattractive given that many of them are also involved in growing their own commercial hybrid maize for sale to the Food Reserve Agency. Most of the senior management positions have traditionally been taken up by expatriates (non-Zambians), while the middle management positions are open to all Zambians.

Livelihood opportunities other than direct employment

As discussed, KASCOL has contracted 160 outgrowers who supply the company. The outgrower scheme began in the 1980s. It was initiated through public invitations from KASCOL that were advertised in the local press. The main targets were people from the surrounding community or chiefdoms. According to the KASCOL smallholders relations officer, 'when this was first done in 1983, it was something unbelievable to people from the surrounding communities'. The extension officer described this initial inertia:

Because of the general disbelief that a company can offer resettlement land for free, the initial response was very poor as many people were sceptical of the underlying motive and intention of KASCOL to give land and settle smallholder farmers with all the infrastructure for free. However, to demonstrate the seriousness of the project, KASCOL management entered into negotiations with its selected employees to serve as pioneers of the scheme.

In 1983, eight KASCOL employees agreed to join the outgrower scheme and serve as pioneers for this scheme. Each outgrower was initially given 4 hectares of cane fields (later increased to 6ha) and a 0.5ha of dwelling space on which to build houses and produce food for their own consumption and enhance food security. But because these employees/outgrowers were insecure about their chances of success under the outgrower scheme, KASCOL agreed to reinstate them in the event that the scheme proved unsuccessful. There were no female farmers in this initial group of eight outgrowers, primarily due to suspicion and low female interest in the project during its inception phase as well as perceptions of unsuitability and strenuous nature of cane farming to women.

In subsequent years, as the community's knowledge about the potential and underlying motivations of the scheme grew, community interest grew, including among women. This induced the need for a more transparent selection and performance appraisal system. So a committee was instituted, including members from KASCOL management, surrounding local chiefs, representatives of local agriculture co-operatives, Permanent Secretary in the Ministry of Agriculture and Co-operatives, and the Permanent Secretary in the Department of Labour and Social Security. This committee was responsible for short-listing, interviewing and selecting potential outgrowers. Once selected, the would-be outgrowers underwent a six-month field training on cane agronomics. This training ranged from land



Photo: © Gary John Norman | Panos

Workers on a sugarcane plantation in Zambia.

preparation, planting, irrigation, weed management, fertilisation, propping through to harvesting. During this period, all trainee-farmers were considered temporal employees of KASCOL and were eligible for a fixed monthly stipend. After the six-month training, each participant went through an appraisal process where the same selection and appraisal committee sits to establish each individual's suitability to the scheme and conduct the final selection of successful outgrowers. The number of outgrowers has increased over the years, but has stabilised at 160. Most current outgrowers are the original ones or their descendants. Of these 160 outgrowers, 28% are women farmers. Evidence suggests that between February 2010 and September 2011, when this study was conducted, the number of women outgrowers had grown by 10. Older farmers appear to dominate; the few youths that are involved are heirs who have taken over the estate from parents who have either died or are too old to farm. Twenty-two of the female registered outgrowers are young unmarried women and have accessed the scheme through inheritance. This indicates that the succession arrangements under the cane farmer agreements are leading to greater participation of women over time.

KASCOL provides outgrowers with interest free in-kind loans in the form of agricultural implements and inputs for almost all activities both directly and indirectly to the smallholders. All mechanised operations related to growing and harvesting, and transportation of sugarcane to the mill, is carried out by KASCOL directly on each of the blocks of cane farms. These constitute the indirect loans which are

knocked off at the point of sale. KASCOL also takes care of the marketing of the harvest for and on behalf of the outgrowers to the Zambia Sugar. And as discussed, each farmer is entitled to 45% of the revenue realised from the sale of cane to ZSC, while KASCOL is entitled to the remaining 55%. The money realised from the sale of cane is paid to farmers in two tranches. The first tranche is paid as lump sum, which is 50% of all the money realised from the sale of cane. The second instalment is spread over an 11-month period and paid either in equal monthly instalments or quarterly. This arrangement is based on farmer preference.

These outgrowers have annual sales of up to ZMK 60,000,000 (about USD 12,669.60) each. After deducting the cost of fertilisers and chemicals (average of ZMK 26,000,000 or USD 5,490.29), water (ZMK 12,000,000 or USD 2,533.98, on average), transport and other, the outgrower would remain with something like ZMK 15,000,000 (USD 3167.40). Income from sale of sugarcane is variable and when the harvest is poor, or when the price is unfavourable, incomes can be much lower than stated here. In a situation where an outgrower fails to get enough income to sustain him/her for the rest of the year, KASCOL gives an 'advance' (that is, a loan) of ZMK 1,000,000 (USD 211) to the farmer to spend on food consumption, goods directly related to health care and to support household investments in child education and meet the cost of farm inputs.

Outgrowers also receive dividends from their equity stake in the company, though as discussed this revenue stream has so far been used to repay a bank loan. As already mentioned, outgrowers tend to have higher incomes, better living conditions and greater self-satisfaction than wage labourers employed by KASCOL. Besides income from sugar sales, each outgrower has about 0.5ha of farmland used for residence and for staple crop (maize) production for household consumption. KASCOL's mode of operation also impacts the livelihoods of local suppliers who provide agricultural inputs and operating materials directly to KASCOL, and those who supply to the Zambia Sugar Company factory which mills KASCOL cane into sugar.

In the case of MDC, the main direct livelihood contribution is through wage employment. Other avenues through which MDC may have positively impacted on the livelihoods of local communities appear limited. Virtually all its inputs other than unskilled labour are sourced from outside Mpongwe District, and this implies that the low-income members of the surrounding communities do not participate in the value chain as suppliers of inputs. Additionally, all its products are sold to corporate customers outside Mpongwe District, so that the low-income members of the surrounding communities do not participate in the value chain as consumers of affordable products. The comparison between the KASCOL and MDC models suggests that a model in which low-income groups participate more in value creation (as shareholders and suppliers, as well as labourers) offers more potential for local livelihoods than models that are mainly centred on wage employment.

Productivity, technology transfer and skills development

Both businesses offer training, but only to those members of the communities that are directly involved in the production activities of the businesses. KASCOL provides training to outgrowers in areas such as land preparation, planting, weeding, irrigation and all the other skills for attending to the growth and harvesting of sugarcane. Workshops and seminars are also held on matters relating to the health of outgrowers (e.g. HIV/AIDS). MDC/ETC BioEnergy only provide training to their workers. However, the company believes that some transfer of know-how takes place by employing local farmers as seasonal workers. It was not possible for this study to verify this claim. However, earlier research by one of the study authors in the same areas found that smallholders who got occasional employment with the company tended to have higher productivity than those that do not (Mpongwe Residents, 2008). Similarly, KASCOL outgrowers have applied farming skills gained through training to their side farming activities in the farmsteads.

Impacts on food security

The impact of the cases studied on food security is difficult to quantify in the absence of data on production and price trends. However, since two of the key elements of food security are food availability and access, it can be argued that both projects have had significant impacts on the food security situation of employees, outgrowers and urban dwellers. As noted elsewhere in this report, both projects have enabled sections of the low income groups to earn cash incomes. These incomes are used to buy food – and this constitutes access, which is an element of food security.

The KASCOL outgrower households involved in focus group discussions were, by their account, food secure: they were able to afford three meals every day. However, female-headed households appeared to have been more secure in terms of nutrition. For instance, while almost all female-headed households were able to have foods such as meat, fish, vegetables, rice, potatoes, maize meal derivatives and bread throughout the year, male-headed households experienced fluctuations as foods such as rice, bread and meat were more accessible only during certain periods, particularly the harvest season when cash flows and disposable income was more solid. For male-headed households, it was reported that there was a tendency to rely more on maize meal based foods for breakfast, lunch and supper during these times of financial stress. Two things could have contributed to this situation: the first is the preference by female outgrowers to receive their payments from KASCOL in monthly instalments; the second is that prioritising food crops primarily for household consumption appears to have contributed also to stability in food security even in terms of nutrition. And as discussed, direct observation by the researchers found that the outgrowers were enjoying good standards of housing and material wealth (as evidenced by cars, for example).

It was not possible to do the same food security assessment for households involved as labourers with KASCOL and MDC. But MDC's contribution to food security in the nearby towns on the Copperbelt Province is significant. Though data on MDC's

Table 5. Maize production estimates, Copperbelt Province (1996-1997)

District	Expected production (metric tonnes)	% production
Chililabombwe	2876.76	5%
Chingola	1338.12	3%
Kalulushi	1725.21	3%
Kitwe	496.08	1%
Luanshya	2006.28	4%
Mufulira	2249.28	4%
Ndola Rural	42,410.34	80%
Total	53,102.07	100%

Source: CSO Crop Forecast Survey.

Table 6. Maize production estimates, Copperbelt Province (2004-2005)

District	Farmer category	Production (metric tonnes)	% production
Chingola	Large scale	9709	8.5%
Chingola	Small scale & medium	1081	0.9%
Kalulushi	Large scale	770	0.7%
Kalulushi	Small scale & medium	1524	1.3%
Kitwe	Large scale	454	0.4%
Kitwe	Small scale & medium	1744	1.5%
Luanshya	Large scale	68	0.1%
Luanshya	Small scale & medium	6742	5.9%
Lufwanyama	Small scale & medium	6272	5.5%
Masaiti	Large scale	2766	2.4%
Masaiti	Small scale & medium	8094	7.1%
Mpongwe	Large scale	51,762	45.4%
Mpongwe	Small scale & medium	14,225	12.5%
Mufulira	Large scale	308	0.3%
Mufulira	Small scale & medium	1534	1.3%
Ndola	Large scale	510	0.4%
Ndola Urban	Small scale & medium	6380	5.6%
Total		113,943	100%

Source: CSO Crop Forecast Survey.

maize production is unavailable, we can gauge its contribution by considering aggregate production data at the district level. In 1996-1997, for instance, Ndola Rural District, where MDC is located,¹³ contributed about 80% of the total maize produced on the Copperbelt (Table 5). In other words, one district produced virtually all the maize crop in the province.

Maize production estimates for 2004-2005 make the contribution of MDC even clearer as the data is disaggregated by farmer category. The large-scale farmer category in Mpongwe District's contribution to total maize production on the Copperbelt was 45.4% and this was the highest production level in the region (see Table 6).

13. Since 2000, following a change in district names and boundaries, MDC lies in Mpongwe District, as discussed throughout the report.

Other local impacts

A number of other local impacts are difficult to quantify but important to mention. Indirect livelihood opportunities are a case in point. In the case of ETC, the growth of income generating activities around the project area, such as trading, vending, transport, restaurants and bars, largely depended on the income and expenditure of ETC employees. The market supported by MDC for workers' families to run had been thriving under MDC but restrictions on access by surrounding communities to the market place imposed more recently had left the market empty of all but a few traders who have struggled to sustain an income. In the KASCOL case, an important outcome of the outgrower programme is the increase of women's participation in

Box 4. Testimony: benefits enjoyed by a female smallholder

Mrs Edina* is a 38-year old female smallholder farmer at KASCOL married to a 42-year old local resident of Mazabuka District. She has 5 children, 2 girls and 3 boys. The girls are 7 and 19 years old while the boys are 2, 13 and 16 years old. In addition, she looks after two dependants, a boy who is 17 years old and a girl aged 15. Her household therefore comprise 9 members. She joined the scheme in 1998 after her mother who joined the scheme in 1993 after the demise of NAMBOARD passed on in 1998. When her mother used to work for NAMBOARD, life was good but now as a farmer, life has become much better. Her mother was trained for six months in cane cultivation, cutting, planting, weeding and had left 7.4 hectares of standing cane by the time of her death.

'I am able to grow maize on the 1 hectare of dwelling space to meet my food security requirements and generate additional income for my household. With proper management and care, we are able to feed ourselves for the whole year. Last year, I harvested 24 x 50kg bags. I have built a three-bedroom house with a two-roomed servant quarters. All my children are in school except for two, of which one has completed school and is about to enter college and the other is below primary school age. I belong to Group 2 of farmers which has 50 houses but only four of us are women. Yet female farmers generally perform better with respect to productivity and investments in household welfare improvements. They invest more in household goods and family education. As you can see, I own a car and have bought a 30 x 30 metres residential plot in Mazabuka town at K 4.5m (about \$1000). I have already bought 1,500x 4 inch blocks you see over there next to the car for this venture. I want to rent the new house so that I diversify my risk portfolio. In addition, I have employed 25 irrigation workers which most of the male farmers fail to do. And because KASCOL has strict labour compliance audits through their Fair Trade affiliation, we are compelled to pay the stipulated minimum wages.

My husband has been very supportive of me. His key role is advisory but I am in charge of receiving all payments with respect to my business. But I think that 7.4 hectares of cane land is much smaller and inhibits our expansion and growth. Something between 10 and 15 hectares would be manageable. So as you can see, our benefits from the scheme and contribution to employment creation for the surrounding communities is largely constrained by our (women's) gross underrepresentation in the scheme. Even in KASFA, there is only one woman in the Executive Committee.'

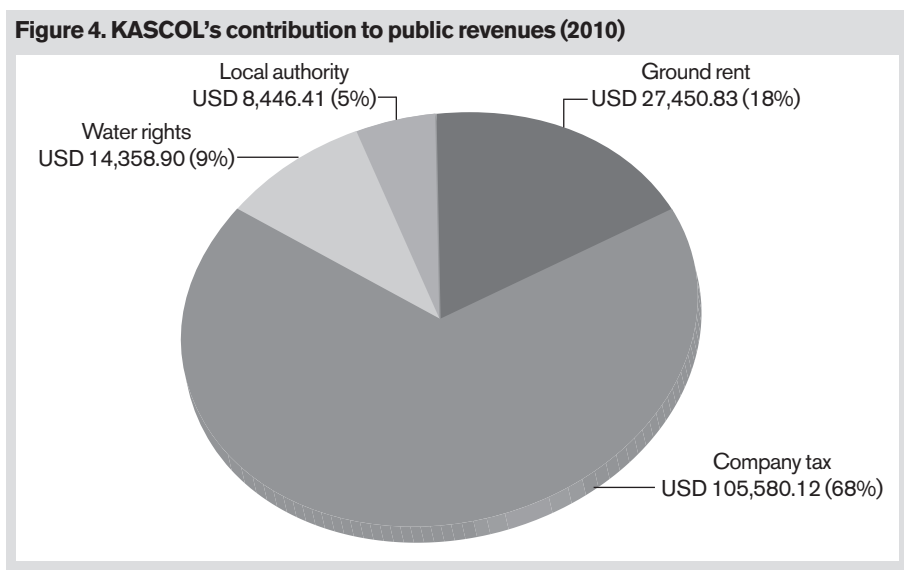
** Her name has been changed for reasons of confidentiality.*

decision-making within the household and community. This is a clear departure from the patriarchal cultural tradition that prevails in the area. Fieldwork suggested that, in the home, married women were fairly strong decision-makers, especially on household expenditures and related issues. This was particularly so in households where the wife was the outgrower. Women also formed a number of groups, such as for savings mobilisation and child health and, in general, women farmers appeared to have challenged negative attitudes about their capabilities and their rights. Box 4 gives one woman outgrower's account of how she feels she has benefited from the KASCOL outgrower scheme.

4.3 Public revenues and public infrastructure development

KASCOL pays land fees (ground rent) to the Ministry of Lands. On average, the company pays ZMK 130 million (about USD 27,450.83 at an exchange rate of USD 1 to ZMK 4,735.74). The annual tax to government by KASCOL is about ZMK 500 million (about USD 105,580.12). The annual contribution to the Water Board by KASCOL is ZMK 68 million (USD 14,358.90). Payments for ground rent, water rights and tax go to the central government. The local authority receives about ZMK 40 million (about USD 8,446.41) for rates and billboards. Councils charge a fee on advertisements and other information displays by organisations on billboards in their districts. A breakdown of public revenues provided by KASCOL in 2010 is presented in Figure 4.

ETC BioEnergy, on the other hand, has an agreement with the government of the Republic of Zambia – the Investment Protection and Protocol Agreement – whereby



Data source: KASCOL.

Table 7. Annual ground rent payments for ETC BioEnergy (2010)

Name of farm	Ground rate (in ZMK)	USD
Chambatata (4450)	61,044,860	12,890.25
Nampamba (4451)	105,044,860	22,181.30
Kampamba (5388)	57,359,860	12,112.12
Total	223,449,580	47,183.67

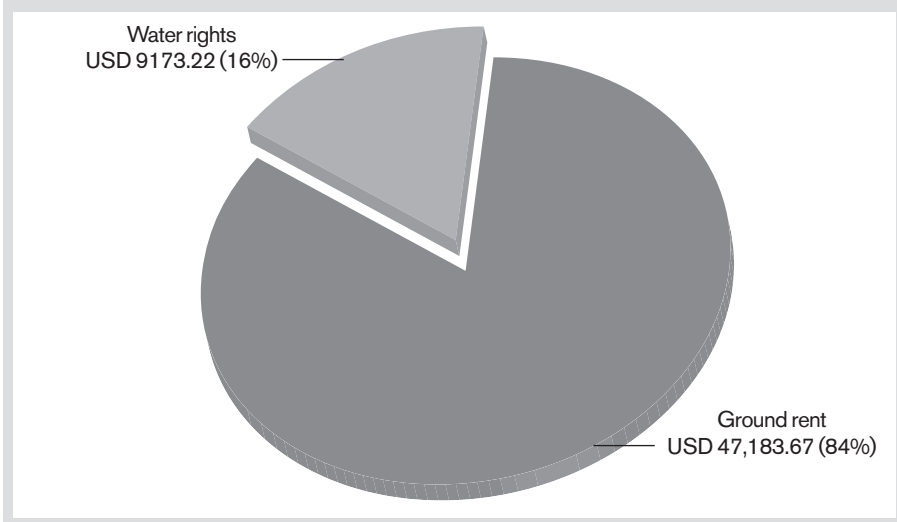
Source: ETC BioEnergy.

the company enjoys a tax holiday. This means that for the first three years of investment in Zambia (starting from 2007), ETC BioEnergy has been exempted from paying tax. ETC has, however, been paying ground rent and the latest figures are as shown in Table 7.

ETC BioEnergy also pays annual water rights and the 2010 figure was ZMK 43,442,000 (USD 9,173.22). Figure 5 shows that the biggest proportion of ETC BioEnergy's payments is for ground rent. The volume of water utilised by ETC is 102,000m³/day. The cost of the water rights is calculated on the basis of water volumes as follows:

- up to 500m³ per day: ZMK 5000 (USD 1.06) per day
- for every m³ above 500m³/day: ZMK 2 (USD 0.0004) per m³
- charge for registration: ZMK 2000 (USD 0.42).

Comparatively, KASCOL, though the smaller of the two projects, contributes more to public revenue than ETC BioEnergy, on the basis of the 2010 figures.

Figure 5. ETC BioEnergy's contribution to public revenues (2010)

Data source: authors' research.

Table 8. A comparison of KASCOL and ETC contributions to public revenue (2010)

	Ground rent (USD)	Corp. tax (USD)	Water rights (USD)	Local authority (USD)	Total public revenue (USD)	Ratios	
						Public revenue to developed land (USD/ha)	Public revenue to total land (USD/ha)
KASCOL	27,450.83	105,580.1	14,358.9	8446.41	155,836.26	68.79	36.12
ETC	47,183.67		9172.22		56,355.89	5.29	1.20

In 2010, KASCOL contributed a total of USD 155,836.26, compared to ETC BioEnergy's USD 56,355.89. For every hectare developed, KASCOL contributed USD 68.79 to public revenues, compared to ETC BioEnergy's USD 5.92 (see Table 8). The difference is due to ETC's tax holiday – a tax incentive given to investors by the government of Zambia. ETC BioEnergy qualified for this incentive because it came in as a new investor in 2007 and bought assets from MDC, which went into voluntary liquidation in 2006. It is possible that MDC, prior to liquidation, was contributing more to public revenues than ETC BioEnergy.

Both companies have provided infrastructure and social amenities for their operations and employees. KASCOL provides housing (316 units) for its employees. It also has a clinic with four members of staff. The clinic serves the company employees and outgrowers. The company also supports a basic school within the estate. Transport is provided for taking schoolchildren to schools outside the estate. KASCOL has also built nine water boreholes, which supply water to houses for its staff and to the residences of outgrowers. Roads and irrigation facilities have been constructed within the estate. These various facilities are not accessible to third parties not related to the project.

ETC BioEnergy maintains an access road owned by the local authority. Apart from this, the company has not invested in public infrastructure projects, but it provides housing for its employees. Also, ETC BioEnergy has five company clinics. A doctor visits the clinics every two weeks. The number used to be seven under MDC but two have since closed. Senior and middle managers have an insurance scheme with Company Clinic, a privately owned surgery in Kitwe; this scheme is not available to other employees. The company also has a school with 330 pupils and 15 teachers. The number of schools was two during the MDC days but one was sold together with Munkumpu Farms. Services are provided for free to company employees. The company also provides housing to its permanent staff and the staff residential areas have the basic social amenities (such as markets, shops, and social clubs).

4.4 Social and environmental impacts

Though agriculture is a beneficial and desirable activity, it often brings social and environmental costs that are not often taken into account when assessing its full impact. This is at least true in the Zambian context. Thus when KASCOL and MDC were being set up in the 1980s, environmental and social impact assessments were not undertaken, and they have never been undertaken at any other time in the lives of the projects. One reason for this is that Zambia at the time the projects were being set up, and to some extent even now, lacked the capacity to carry out environmental assessments at a scale and scope that would include the majority of agricultural projects. At the time of project inception, the Zambia Environmental Management Agency (ZEMA), which regulates environmental issues, had not yet been established. The Environment Council of Zambia regulations cover issues like environmental impact assessments, air pollution, waste management, pesticides and toxic substances, water pollution, hazardous waste, and ozone depleting substances.

Presently, both companies claim to adhere to ZEMA standards. However, both projects generate toxic emissions into the air, soil and water. Additionally, land clearing on a scale practiced by the two projects has potential to negatively impact on the ecosystem. With regard to emissions, both projects are heavy users of chemical fertilisers and some of this fertiliser probably finds itself in areas beyond the farms through such means as running water, seepage into underground water systems and evaporation. MDC relies heavily on chemical weed killers. These chemicals are applied through aerial means. This method of application creates the possibility for the chemicals to be blown far beyond the farm with consequent damage to the atmosphere. A related problem is the safe disposal of used containers for pesticides and other toxic substances. Poorly disposed used containers are a real danger to the surrounding communities who pick up these containers and start reusing them for such things as water and food storage. The villagers are often not aware of the dangers inherent in the use of such containers.

In KASCOL, the burning of sugarcane plantations in readiness for harvest is a source of pollution. This is done annually and is a source of particulate matter (smog) and of oxides of nitrogen (NO_x). Further, some environmental concerns may not directly be addressed by ZEMA. A study by German *et al.* (2010) revealed that industrial-scale biofuel plantations, including in Zambia, negatively impact the environment through deforestation, for example. In this regard, it is possible that the jatropha plantation developed by ETC BioEnergy contributed to deforestation. The abstraction of water for irrigation purposes is having some effect on the water resource. Both companies are heavy users of irrigation water and though the impact could not be determined, abstraction of water to irrigate thousands of hectares is bound to have an effect on the resource. Reference made by KASCOL staff to irrigation water constraints as a limit to the land area that can be cultivated suggests that there may be a problem of water scarcity. More research is needed to establish whether this is indeed the case and, if so, what impacts it has on people around the farm.

On a positive side, Mpongwe Farms practice zero tillage, which is an aspect of conservation farming. KASCOL also only tills the land once in seven years. Mpongwe does not burn the fields. These practices are more environmentally friendly than the slash and burn method, which is practiced by the majority of subsistent farms in the country.

With regard to social impacts, it is impossible to assess the livelihood impacts of the loss of land at the time the investment projects started. In both cases, too much time has passed to permit meaningful assessment. But an issue worth discussing relates to the acquisition of land for the two projects.

In the 1970s, land currently held by ETC was under the control of chiefs, among them Chief Ndubeni and Chief Lesa. It was a forested area used for hunting and gathering of wild products by villagers who lived near the area. In 1976, the government of Zambia, through the Ministry of Agriculture, asked Chief Ndubeni for land which they could use for commercial agriculture – particularly a government project then known as Mpongwe Wheat Project. Chief Ndubeni referred the government officers to the Chimbamanga family, which under customary tenure held the piece of land in which the government was interested. At the time, one of the Chimbamangas was Member of Parliament for the area, and he surrendered the land to the Ministry of Agriculture which, in fact, was facilitating land acquisition by the project. This negotiation concerned about 1000ha of land.

When MDC was later incorporated, more land was leased to it by government, bringing the total landholding to 35,411 ha. Much of this land was not utilised for farming, although the surrounding local communities enjoyed communal access to the land. Because this land was not originally inhabited by locals, no physical displacement of local population took place. However, local communities lost access and use rights to common property resources such as water, hunting, gathering of wild fruits, wood fuel, honey, mushrooms and other forest products, which helped to sustain their livelihoods. It was not possible to establish how this loss of resources impacted on local livelihoods. Because women are often responsible for gathering wood and non-timber forest products from these common resources, it is likely that they were particularly impacted on. Evidence also suggests that some farmers had practiced the chitemene system of agriculture, i.e., slash and burn. Rights to these 'unused' lands were ceded with no compensation by local chiefs and their constituencies. As mentioned above, the total landholding of MDC subsequently grew further through mergers with other farms.

There is no evidence to suggest that land acquisition at the early stages was contested or conflictual. But growing land scarcity in the project catchment areas is now being felt by local people. This growing land scarcity is being driven by demographic changes: the population of Mpongwe District has been growing at the fastest rate in Copperbelt Province for the past three decades (CSO, 2011). Growing land scarcity is compounded by the existence of big commercial farms

that have been established in the area, e.g. Dar Farms, which is said to have about 76,000ha, in addition to the area taken up by MDC.¹⁴

The severity of the problem of land scarcity may be appreciated when one considers that outside the few people that are in wage employment, the majority of Mpongwe residents derive their livelihoods through the cultivation of crops for own consumption. For these people, land is their most important asset. Growing land scarcity erodes local access to a most important livelihood source for rural dwellers. This situation has resulted in tensions at the local level and with the company. MDC's land wrangles with the so-called 'squatters' on their farm exemplifies this tension. Squatters started encroaching on MDC land around 2003. Initially these were mostly individuals retiring from MDC and companies in urban areas. Later some local villagers joined in. When the company noted the presence of squatters around the farmland, it engaged independent surveyors to verify the farm boundaries. It was ascertained that the squatters had in fact encroached on company land. Squatters resisted attempts to remove them and they sued the company. The case was resolved in favour of MDC in the Supreme Court. But getting all the squatters to move out of the farm has not been easy even after the court ruling. As a compromise, some squatters have been allowed to stay on the edge of the farm, while others have moved out. The focus group discussion held with Ndubeni villagers revealed that growing land scarcity is fostering hostile attitudes among villagers towards large-scale land investments in their area. The former Member of Parliament at the time of the MDC land transaction, now a villager in Chief Ndubeni area, regretted that he had given land to MDC back in the 1970s and wished it could be repossessed. The company is aware of the growing dissatisfaction among villagers due to land pressure and is considering introducing an outgrower scheme whereby land would be subleased to local farmers for these to produce for the company on contract.

For the villagers, the blame for these tensions is also on their chief, who has continued to give out land to investors in exchange for gifts, with apparent little regard to the needs of his subjects. Worse still, according to villagers interviewed, the chief does not want them to get leasehold title: 'It is not easy to get title deeds. The chief refuses to give us (application) forms because he fears that he would lose control of the land', said participants in focus group discussions. The loss of control that the villagers were referring to is, effectively, the chief's inability to give land to investors once the villagers get leasehold title. Without leasehold title, the chief can more easily take away land from the villagers and allocate it to investors.

The social impact of the problem of land scarcity may also be gauged from a statement made by one villager, the former Member of Parliament for Mpongwe, who claims to have given the land to MDC in the 1970s: 'If I heard that Nampamba (Farm) was closed, I would be very happy because we would get back the land.' Alas, it is nearly impossible for villagers to get back land that is held on leasehold title.

14. Land scarcity is location-specific. There are areas in Mpongwe District where land is still available, but these areas are far from the road and, as such, they are unattractive to both the investor and the villager.

Constrained access to land may throw many into poverty, particularly if agricultural investments do not generate sufficient employment for local people. The youths are especially vulnerable, as their land access is particularly limited yet they may face growing food needs as they establish new households. In Chief Ndubeni's area, the youths who are setting up their independent households can only get pieces of land from that held by their parents, assuming their parents have enough. It is difficult to find suitable 'virgin' land that can be brought into production.

On the other hand, MDC has land lying idle – only about 22.7% of the farm is being utilised. Growing land scarcity and idle plantation land are the two factors that underpin the encroachment by squatters on company land. Legal battles have been fought over the matter and, from the legal point of view, ETC has emerged as the winner. Socially, however, the company has had to contend with growing hostility exhibited in such behaviour as deliberate damage to company property from some community members. A senior manager suggested that the biggest number of those in prison cells in Luanshya town probably have something to do with MDC. In some cases, the company has tried to reach a compromise by allowing squatters to use company land for free, on the understanding that they can be moved out when the company needs the land. Another solution that is being contemplated is to turn the squatters into tenant or contract farmers.

Differently to the land acquired by MDC in the 1970s, KASCOL land was already under leasehold tenure when it was acquired by the company. The land was thus already earmarked for commercial agricultural use and part of it was already under agricultural use when it was acquired by KASCOL. The government played a central role. It facilitated the compulsory acquisition of about 4000 hectares. The compulsory acquisition was motivated by three economic or potential success factors of location, namely, its nearness to the Zambia Sugar Mill or factory; good soils to support productive cane growing; and its nearness to Kafue River which provides stable and reliable water source for cane irrigation and domestic use. Its location near the factory was also important as transporting cane over long distances is well known as a costly venture and as cane deteriorates quickly once harvested it has to be used within a short time period. The three commercial farmers that owned this land were fully compensated for their land, including any improvements that had been made on it. This was consistent with the provisions of the Land Acquisition Act of 1970. Because at the time of its acquisition the land belonged to individual commercial farmers, there is no compelling evidence to suggest that this had any significant implications on local communities and deprivation of their ownership, rights and interests to this land.

5. Conclusion

This report has examined two experiences of large-scale agricultural investments in Zambia. Both experiences have been implemented for decades – MDC since the 1970s, KASCOL since the early 1980s. While this circumstance made it impossible for this study to assess the socio-economic impacts of the projects on local livelihoods at the time of their establishment (for example, with regard to impacts linked to loss of land where relevant), the sufficient implementation time has enabled us to learn lessons on how agricultural investments may work in the longer term.

The important caveat to this consideration is that, for much of their duration and until their recent privatisation, both projects had a strong development component beyond commercial returns. KASCOL is a certified fair trade operator. These characteristics make the project significantly different to the many, more recent investments that are being carried out in many parts of Africa as part of the ongoing global land rush. Recent changes in employment conditions, including wage levels, following the privatisation of the two companies, illustrate the difference between investments mainly or solely driven by commercial returns and projects with an explicit development objective.

In both experiences, enabling factors have played an important role in making the ventures possible. A key enabling factor in the initial stages of the KASCOL project was the configuration of expertise and contributions provided by the different shareholders. CDC and ZSC brought production and management expertise, while two banks brought financial resources to the new company. CDC, in particular, managed the initial set-up and provided management expertise. CDC involvement may also have played a role in lowering the risk profile of the project, thereby making it more appealing to private investors and lowering the rate of return needed to make the project a commercially interesting proposition. The early association with CDC was an important enabling factor also for MDC. CDC injected cash into the company and provided management expertise. The good rains and fertile soils of Mpongwe District have also contributed to its success. The company sits on an aquifer which has proved invaluable as a source of irrigation water. Partly due to the high productivity of the company, the road infrastructure has been developed and this has presumably reduced the company's transport costs. Both KASCOL and ETC were making healthy returns at the time of the research.

Though not set up as a development aid agency, CDC was in many ways a vehicle for delivering development aid to poor countries. It invested in the least developed countries and in sectors that would ordinarily be shunned by private investors: it undertook investment projects where financial returns were too low, too distant or too risky to attract capital flows from private investors. The British government did not require it to make a profit beyond that needed to service its debts (Tyler, undated). This suggests that strategically targeted development aid can play an important role

in promoting commercially viable and socially inclusive models of agricultural investments.

Both companies are large employers in the Zambian context, but overall job numbers have remained small compared to the rural labour force. ETC employs a larger number of labourers, though its landholding is also much larger and its labour-to-land ratio is lower than for KASCOL due to higher levels of mechanisation. The large number of employees under ETC is mainly an outcome of the labour intensity of jatropha production. Both projects have experienced downward pressures on wages. And while both projects have created jobs in skilled positions, the rural poor are most likely to take up low paying jobs due to their generally low educational status. These circumstances raise real questions as to the best ways of reducing poverty in rural areas. Investment projects that maximise positive economic linkages with local rural areas through multiple avenues appear to have the highest potential for impact on poverty.

In addition to jobs, important long-term benefits include public revenues, though in the case of ETC this benefit has been limited by tax incentives granted by government authorities; indirect livelihood opportunities, for instance for traders selling goods and services to company employees; and positive impacts on food security via household income (as shown by the KASCOL outgrower scheme) and effects on food production and prices (in the case of ETC).

Since poverty is predominantly rural, agricultural investments have significant potential in providing the rural poor with jobs and income growth. However, an agricultural investment in rural areas is expensive, and financial returns are generally low. Additionally, where investments have taken place, the rural poor often take up low paying jobs due to their lack of education and skills. Therefore, in addressing the daunting problem of rural poverty, government should put in place policies that promote inclusive investments in agriculture. Investments in rural infrastructure should be top priority. Government should also double efforts in the provision of education to rural population. Adult education, and vocational training, should be extended to rural areas.

On the other hand, growing scarcity of valuable land in parts of the country is resulting in tensions around agricultural investments involving large plantations. This is particularly relevant in those parts of the country that appear particularly attractive to outside investors, for instance due to water availability or soil fertility. This is the case of the Mpongwe area, where commercial pressures on the land are on the increase. The circumstance is exacerbated by the different ways in which formal legislation and local people view land ownership in customary areas. Even in projects that have been established for a very long time, this situation can result in conflict over land, including encroachment and litigation.

Neither project is using the land allocated to it to its full potential. Where land is becoming scarcer and investors hold big tracts of land that they are not using, it may make economic sense to rent land to local farmers as part of contract farming

arrangements. Renting unused land to local farmers can also help stem hostile attitudes by poorer groups towards large-scale operators. ETC is contemplating this option as a possible solution to encroachments on its land by villagers that have run out of land for farming as a result of demographic growth and increasing commercial pressures. But these experiences also highlight the importance of fully factoring in opportunity costs in land allocation decisions. Government should proactively ensure that investors do not hold on to land they do not utilise for many years. Mechanisms should be in place to only allocate to investors land that they can utilise within a reasonable span of time, and to withdraw land from investors that do not comply with agreed development plans.

The outcomes of agricultural investments are differentiated along gender lines. While it was not possible to establish the livelihood impacts of loss of resources when the farms were established decades ago, the conversion of common property resources is likely to have particularly impacted women, who are often responsible for gathering wood and non-timber forest products. In the longer term, both projects have had gender-differentiated outcomes. The KASCOL smallholder scheme, whilst dominated by men, was deemed accessible by women, albeit with some limitations due to work loads and intra-household decision-making dynamics. This was illustrated by 28% of the outgrowers being women. Also, women had a strong voice in decision-making within households where women were registered as outgrowers. ETC employed significant numbers of women, with the provision of some important gender sensitive terms of employment (e.g. level of sick leave, or leave for caring of the sick) and opportunities for management-level staff to access training and professional development. But women's participation in the business seems confined in roles traditionally associated with women. Women employed in seasonal labour on KASCOL's estate are confined to tasks that commend lower wages or shorter periods of employment, for example replanting which only takes place every few years and there were no women in senior or middle management positions.

Overall, investments that include low-income groups as producers in the supply chain and as shareholders in decision-making and profit-sharing seem more promising than models that only purport to involve the poor as wage labourers. At KASCOL, outgrowers involved in the outgrower scheme appear to have higher incomes, better living conditions and higher levels of overall self-satisfaction than their counterparts who work as wage labourers in the same company. Similarly, joint ownership of the company, whereby local groups have an equity stake in the business, provides the poor with additional income opportunities and with avenues to oversee the management of the business. That said, the higher returns associated with participation in a business as a supplier or a shareholder are also associated with higher business risks, though mechanisms can be developed to manage some of these risks, particularly with regard to crop insurance. Also, an important concern relates to the terms of employment offered by the outgrowers: casual labourers hired by them enjoyed few of the social security benefits associated with direct employment with the company.

The often stated downside of inclusive models involving a big number of small outgrowers is high transactions cost. KASCOL, however, has managed to keep these costs at manageable levels because of three main factors: first, the outgrowers are geographically concentrated on one farm which makes it easier to provide them with extension services and to supervise their farming activities; second, the outgrowers use KASCOL land and this increases compliance levels in contractual matters as the cost of eviction from company land is high on the part of the outgrower should they abrogate the contract; and third, outgrowers do not have alternative buyers of cane and this prevents from side-selling their cane. While the overall number of KASCOL outgrowers is limited, this experience shows that collaborative models are possible and can be commercially viable.

In countries where governments are genuinely committed to poverty reduction, these observations create a powerful argument for effective policy interventions aimed at promoting equitable inclusion of the low-income as producers and equity owners. Given the benefits of collective action, collective equity ownership through a trust is perhaps more advantageous to the low income than having individual poor people each having few shares.

Of major concern is that large-scale agricultural investments that embody elements of KASCOL's business model are a rare practice in the current wave of agricultural investments in Zambia. Currently, we mainly observe three models facilitated by the government:

- large farm blocks with smallholder subdivisions meant for the settlement of mostly poor local populations, often with very little supporting infrastructure or any other support
- large farm blocks for commercial farming and, within the surrounding areas, land earmarked for smallholder farming activities without any deliberate strategy for creating inter-linkages
- a farm block comprising smallholder farmers that are integrated into the large-scale farming investment.

Very few ventures fall into this last category and are comparable to KASCOL's performance on inclusion of low-income groups. Investment and agricultural policies to support inclusive business models should start by recognising rural communities as resources owners. Most of the new farm blocks being opened up for commercial agriculture are on land under customary tenure and converted to leasehold with the consent of local chiefs. The government should ensure the inclusion of local communities as resource holders and business partners. Securing local land rights and achieving the equity objectives provided for in the Land Act of 1995 would require the government to provide for communal registration of customary land rights and for affirmative action to protect women's rights to land and natural resources. For example, the ongoing review of the Draft Land Policy should provide for joint registration of land that is under joint occupation by married people. The impact of large-scale investments on demographic changes should be taken into account in estimating future land needs.

With increasing population and the need for rural investments, it is becoming clear that land use planning, currently undertaken in urban contexts, should be extended to rural areas. Building on ongoing moves towards decentralised planning, the government should promote devolved, participatory land-use planning, where there is increased voice and visibility of affected people, especially women, and effective accountability mechanisms. The current system where chiefs are heavily involved in land allocation is not working well in some cases. Chiefs are increasingly becoming unreliable in matters of protecting the needs of their subjects.

Given the prevalence of seasonal and casual employment, labour legislation would also need to be reviewed to ensure that the terms of these types of employment meet international labour standards. Because women are concentrated in these positions, this would have significant gender equity benefits. Private-community partnerships should be explored, and the KASCOL model provides a good starting point.

Looking beyond Zambia, the experience discussed in this report provides insights on practical ways to include smallholders in investment processes, both as suppliers and shareholders, and it is hoped that this report may help feed lessons learned into international policy debates about agricultural investments in the global South.

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Long-term outcomes of agricultural investments:

Lessons from Zambia

Agricultural investments involving the acquisition of long-term rights over large areas of land in developing countries have been the focus of much debate in recent years. Many have welcomed the renewed momentum for private investment in agriculture, but trends towards large-scale land acquisitions raise major social, economic and environmental concerns. While calls for more inclusive investment models have multiplied, there is limited understanding of what works and under what conditions. For many recent agricultural investments, it is just too early to assess socio-economic outcomes.

This report discusses two agricultural investments in Zambia. Both projects started as state-led, development-oriented initiatives in the 1970s and early 1980s, and were later privatised. This long implementation history provides an opportunity to assess the longer-term socio-economic outcomes of agricultural investments, and to distil insights on practical ways to include lower-income groups in investment processes.

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