DYNAMICS OF LARGE SCALE INVESTMENTS IN AGRICULTURE: LESSONS FROM KALEYA SMALLHOLDERS COMPANY AND MPONGWE DEVELOPMENT COMPANY

Fison Mujenja

RuralNet Associates Ltd

RuralNet Associates would like to thank the International Institute for Environment and Development (IIED) and in particular Dr Lorenzo Cotula and his colleagues for giving RuralNet the opportunity to carry out these case studies. The Food and Agriculture Organization of the UN (FAO) is greatly appreciated for funding the study. I would also like to thank my fellow researcher, Njekwa Mukamba for the job well done in the research work. This report benefitted greatly from comments and inputs from Dr Dennis Chiwele of RuralNet, Dr Lorenzo Cotula of IIED, and Liu Pascal of FAO. Their inputs are greatly appreciated: any shortcomings in the report remain the author's.

Acronyms

CDC	Commonwealth Development Corporation
COMESA	Common Market for Eastern and Southern Africa
CSO	Central Statistical Office
DFI	Development Finance Institution
DFiD	Department for International Development
ZEMA	Zambia Environmental Management Agency
EIA	Environmental Impact Assessment
FAO	Food and Agriculture Organization
FISP	Farmer Input Support Programme
FSP	Fertilizer Support Programme
GMO	Genetically Modified Organisms
GRZ	Government of the Republic of Zambia
IFAD	International Fund for Agricultural Development
IIED	International Institute for Environment and Development
IPPA	Investment Protection and Protocol Agreement
Kascol	Kaleya Smallholders Company Ltd (Kascol)
MDC	Mpongwe Development Company
NAMBOARD	National Agricultural Marketing Board
ODS	Ozone Depleting Substances
PRSP	Poverty Reduction Strategy Paper
PTF	Privatization Trust Fund
PTS	Pesticides and Toxic Substances
SDC	Swiss Development Cooperation
UN	United Nations
UNDP	United Nations Development Programme
USD	United States Dollar

ZDA	Zambia Development Agency
ZMK	Zambian Kwacha
ZSC	Zambia Sugar Company

1. TOPIC, RATIONALE AND METHODS

This report discusses two agricultural investments in Zambia. It is part of wider research involving funding from the Food and Agriculture Organization of the UN (FAO) and coordination from the International Institute for Environment and Development (IIED). The wider research involves country reports from Ghana, Mali and Zambia. The purpose 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). MDC went into voluntary liquidation in 2006 and its farms were bought by ETC BioEnergy and another investor. At the time of study, ETC Bioenergy sold the farms to another company, Zambeef.[1] Though liquidated in 2006, MDC continued to exist until 20th 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. Indeed, 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 have been 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 implementation time behind these two experiences, the case studies 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.

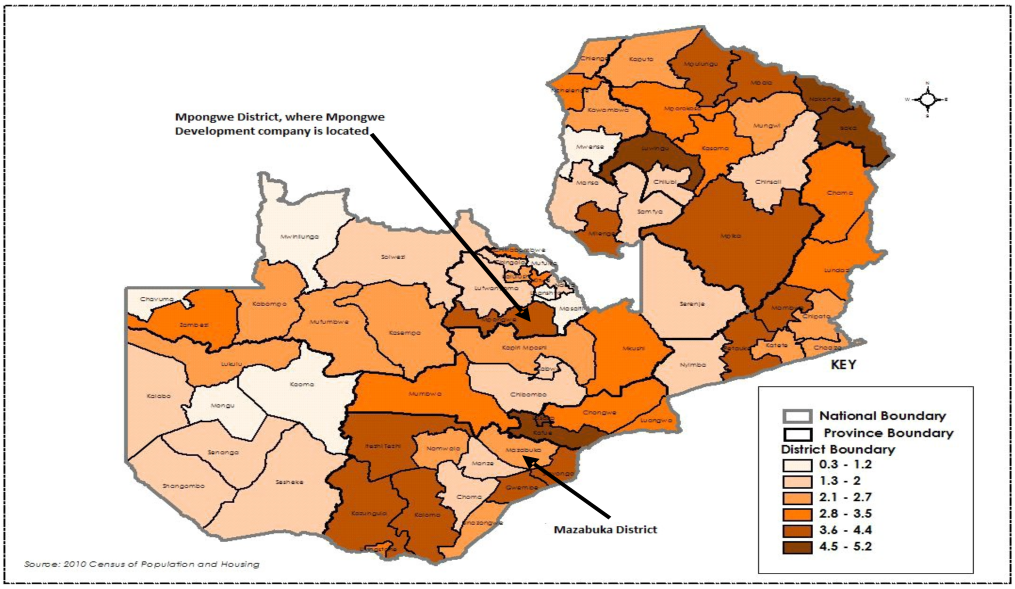
1 In this report, name references are made to both Mpongwe Development Company and ETC BioEnergy, with a preference for Mpongwe Development Company whenever reference is being made to events before 2007, and ETC BioEnergy when referring to events after 2007. The name Mpongwe Development Company is used in cases where events cut across the two periods.

Despite their similar historical roots, the two case studies are rather different. Kascol is an agribusiness company operating in Mazabuka district, in Zambia's Southern Province. It is a single-product company that produces sugar cane on a farm situated about 8 km south of Mazabuka, the main town in Mazabuka District. The sugar cane is sold to Zambia Sugar Company, which mills the cane into sugar for the local and export markets. According to the latest annual report of the Zambia Sugar Company, 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 Zambia Sugar Company 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 2265.3 hectares 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 subleases about 1000 hectares of this land to about 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 13% of the equity in the company, and a district-level sugar cane grower association holds an additional 25% equity.

ETC BioEnergy (formerly Mpongwe Development Company, MDC) runs plantations for a total of 46,874 hectares in Mpongwe District, in Zambia's Copperbelt Province. The total landholding consists of three farm blocks, each with a separate 99-year lease. Farm number 4451 (Nampamba, 22,921 ha) and farm number 4450 (Chambatata, 12,490 ha) are used for crops production while farm number 5388 (Kampemba, 11,463 ha) is used for ranching. Of the total land area, 10,661 hectares are currently developed, of which 3,000 hectares are under irrigation. Various crops are produced, sometimes the mix changing from year to year. In the last production season, this mix consisted of wheat, maize, soybeans, rice, mixed (dried) beans, barley and jatropha. ETC BioEnergy's "traditional" crops (wheat, maize and soybeans), however, 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.

The map in Figure 1 shows the location of the districts where the two projects are. The map also shows the population growth rate for the districts in comparison to all others.

Figure : Mpongwe And Mazabuka Districts, Where The Projects Are Located



Source: Adapted from 2010 Census of Population and Housing Preliminary Report

Research methodology

The research methodology involved interviews with company management and staff, villagers and other stakeholders At MDC, the research team conducted face-to-face semi-structured interviews with company management, Mpongwe District Council, a former member of parliament who presided over land negotiations back in the 1970s, residents of Mpongwe, and a focus group discussion with residents of Chief Ndubeni's area. Chief Ndubeni was one of the Chiefs who owned/controlled the land that Mpongwe Development Company acquired. Similarly, at Kascol, the research team held face-to-face semi-structured interviews with company management and held focus group discussions with two groups of outgrowers (including both men and women). An interview was also held with a descendant of one of the original owners of the farms that Kascol bought in the early 1980s. Apart from Kascol, the team also interviewed a management representative at Zambia Sugar Company, and another at Krookes Brothers, a sugar cane estate. Besides interviews, observations were also made to the farms and farm infrastructure.

Study limitations

This study had some limitations. Limited access to data resulted in gaps in information presented and consequently affected the thoroughness of the report. Both case studies are private corporations that do not ordinarily disclose company information to the general public. ETC BioEnergy, for instance, restricted researchers on who to interview in the company. The length of time in which both companies have existed made it impossible to do detailed analysis of performance and outcomes over history and thus the researchers resorted to focusing on the present while being aware of history to the extent possible. The tight timeframe within which the fieldwork was conducted also resulted in a limited number of interviews being conducted.

Report outline

This report is divided into four additional chapters. Chapter 2 provides the national context and discusses 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 socioeconomic outcomes for the two projects and Chapter 5 is the conclusion.

2. NATIONAL CONTEXT

2.1 Policy framework

This section deals with the policy framework for large-scale agricultural investment. It begins by describing matters related to land and then moves on to a brief consideration of agricultural policy.

2.1.1 Land policy and practice

Zambia's total land mass is approximately 75.2 million hectares, of which 12% (or 9 million hectares) is suitable for arable use (GRZ, 2002). Of the 9 million hectares of suitable land, about 1.7 million hectares are under cultivation (GRZ, 2009). These 1.7 million hectares is the total land under crop production and takes into account both subsistence and commercial farming.

Under Zambian law (Lands 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. Note, however, that ccontinued reference to customary areas in official documents, including the lands act, is 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. As we note later, this has created further confusion by equating customary areas with customary tenure. The remaining 6% is 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 is not helping much as it leads to confusion and the tendency by some to exclusively equate the size of the land under leasehold tenure with the size of state land. This point is elaborated on further down.

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).

That said, there are two major systems of land tenure in Zambia which, to an extent, parallel the two land categories just described: customary and leasehold. Land that is held under customary tenure is controlled by traditional rulers, locally known as chiefs, using local customary laws, as long as such laws are not in conflict with statutory law (e.g., the Lands Act of 1996). Chiefs are the custodian of customary law and they subsequently control land in their chiefdoms. Customary law is unwritten and is area-specific, that is, it depends on the unwritten traditions and customs of each chiefdom. It is estimated that some 94% of Zambia’s land is held under customary tenure (GRZ, 2002). However, as noted above, this is not correct as it appears to equate customary tenure with the size of customary areas. Land in customary areas can be held under leasehold title and this happens from time to time. Thus, land held under customary tenure must have reduced over the years as some of it is now held under leasehold tenure.

Customary land tenure is what most Zambians, especially in rural areas, are acquainted with. By virtue of belonging to a 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 the customs and traditions of the chiefdom. This is one of the sources of tenure insecurity under customary land tenure. Evidence from the field suggests that this is a major concern for some villagers in Chief Ndubeni’s area in Mpongwe district. These villagers complained, in a focus group discussion, that the traditional ruler was getting land from them and giving it to people coming into the area.

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. PRSP, 2002). However, as in the case for customary tenure, this 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 . When Zambia became independent in 1964, there has since not been any redefinition of the boundaries of state land. State land was, and has remained, about 6% of the total land mass. The current practice is that land under leasehold tenure can come from either state land or from reserve and trust lands which together form customary land. It is unlikely, therefore, that land under leasehold tenure corresponds to the 6% state land size.

Land under leasehold tenure is ordinarily used for residential, commercial, industrial, commercial and agricultural purposes. Both nationals and foreigners can obtain leaseholds. In the case of foreigners, the Land Act of 1996 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.

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. Box 1 below gives some details on how this is done. In some respects, it is desirable to convert land under customary tenure into leasehold tenure because customary tenure has very little protection under the law and often subject to abuse by chiefs, and sometimes even by the state.

The practical implication of customary tenure implies is that 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. Such alienation effectively 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). He in effect becomes a tenant to the state Tenure change also means that the area chief loses control over that land.

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 situation is aggravated 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

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:

a. 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.

b. 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

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 what was formerly designated Crown land (now called state land), implying that land that is currently under leasehold tenure in these areas was converted from customary tenure in customary areas – which consists of reserve land and trust land which the colonial government had reserved for indigenous. The terms ‘state land’ and ‘customary area’ are here being used in the original sense, that is , state land means that portion of land originally reserved for European settlers and customary land is as that portion of land originally reserved for indigenous people. As discussed, land in customary areas is held by chiefs on behalf of their subjects, though ultimately this land is vested in the President for and on behalf of the people of Zambia. Land under customary tenure can be turned into leasehold tenure by following procedures laid out in the Lands Act. One important element of those procedures is the consent of the chief himself, though in practice chiefs do not always act in the best interests of their subjects.

The role of chiefs is illustrated by the acquisition of land by MDC. In the 1970s, land currently held by MDC 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. 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 area Member of Parliament and he surrendered the land to the Ministry of Agriculture which, in fact, was facilitating land acquisition by MDC[2].

The procedure for the acquisition of customary land is largely the same today (see Box 1).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. In practice, the government has taken measures to proactively facilitate investors’ access to customary land. Under the Investment

2 Interestingly, the current Republican Vice President, Dr Guy Scot, was one of the promoters of MDC

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).

One of the roles of the Zambia Development Agency is to facilitate land acquisitions by investors, including through the creation of 'farming blocks'. Chiefs have been encouraged to give land to investors in the name of economic development. Thousands of hectares have since been given to investors by chiefs and have either been converted to leasehold tenure or are in the process of doing so.

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. Similarly, in addition to the "virgin" land that MDC originally acquired in Nampamba, subsequent expansions of company operations involved acquiring titled land (Nchanga Farms) from an existing commercial establishment. Purchase of land which is already titled is largely a private arrangement between the buyer and seller.

However, even in private transactions the government often facilitates the acquisition of land by "big" investors. This was the case with both Kascol and MDC. In the Kascol case, the government persuaded three farmers who owned the land to sell it to Kascol. Though the original farmers may have been happy with the money they got (as indicated by a grandson of one of the original farmers), it is not clear to what extent the transaction was that of a willing-seller-willing-buyer, given that government was heavily involved.

2.1.2 Agricultural policy

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 favored maize production. The shift to a more diversified agricultural product base is seen as something good for the sector as the emphasis on a single crop led to the neglect of infrastructure and service support to other equally rewarding agricultural activities in the sector, to the detriment of the sector as a whole.

The agricultural policy has continued the journey to market liberalisation started in the early 1990s which involved removal of consumer subsidies on maize and maize products and the removal of price controls. The policy encourages exports and imports of agricultural commodities and inputs and thus, in the past 15 years or so, the policy thrust has centred around (a) consolidating the liberalization of agricultural marketing; (b) strengthening the liberalization of trade and pricing policy; and (c) streamlining the land tenure system (PRSP, 2002). Current policy intentions are to: (i) develop and implement policies and programmes that support crop diversification, livestock and fisheries production, increased productivity in crops and livestock, sustainable land and water management, including forestry, agro-forestry, climate change adaptation and mitigation and other environmentally friendly agricultural systems; (ii) facilitate equitable access to land for agricultural purposes; (iii) adhere to predictable, rule-based market and trade policies and strengthen public-private coordination and dialogue; (iv) facilitate private sector to scale-up investments in production, input and output markets, processing and value addition in crops, livestock and fisheries; extension linkages focusing on Public Private Partnerships (GRZ, 2011).

In spite of these policy pronouncements and intentions, 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 (GMO) maize donations by WFP, which it rejected 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 (PSP), renamed Farmer Input Support Programme (FISP) in 2009. The maize pumper harvests that have been experienced in the last three consecutive farming season may be attributed partly to FISP. The government also introduced the government owned Food Reserve Agency which buys maize from small scale farmers. This clearly 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 liberalization policies.

Apart from these isolated success stories in agriculture, the country is yet to have a vibrant agriculture sector. The fact that less than 2 million hectares are under cultivation means that Zambia's agricultural potential is yet to be realized and government is making efforts to encourage agricultural investments in such areas. To that end, 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 (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 as follows:

- 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 10% on income from farming;
- Farm works allowance of 100% of expenditure on stumping, clearing, prevention of soil erosion, bore holes, 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 the distributing company commences business;
- For rural enterprises, tax chargeable reduced by 1/7 for the first 5 years; and
- For business enterprises operating in a priority sector under the Zambia Development Agency Act 2006, a 0% tax rate for the first 5 years , a rate reduced by 50% from years 6 to 8, and a rate reduced by 25% from years 9 to 10.

2.2. 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.

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.

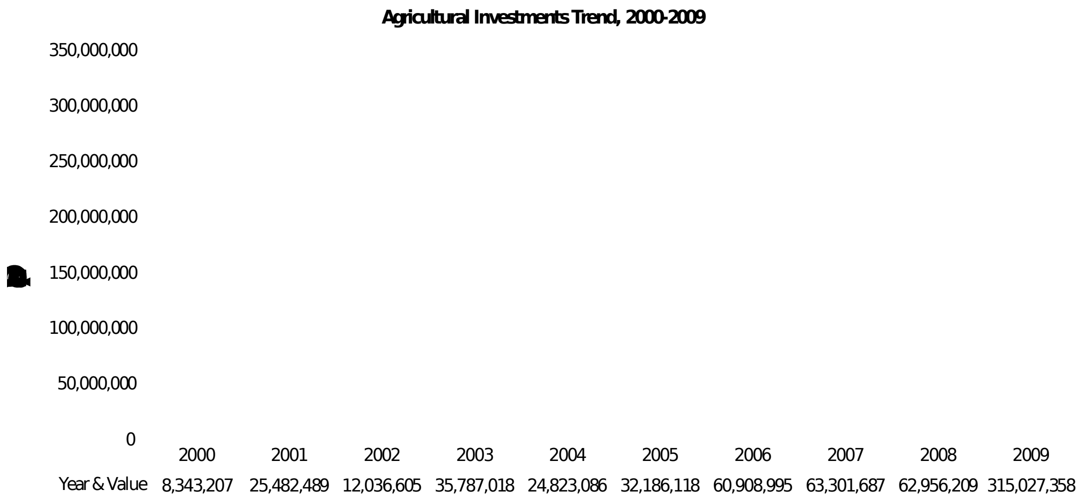
MDC, which was jointly owned by the government of Zambia and Commonwealth Development Corporation (CDC), was effectively sold to CDC by way of increasing its shareholding in the company from 50% to 70% shareholding. The government reduced its shareholding to 30%, and this equity was meant to be transferred 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 the Zambia Sugar

Company; when the latter was sold to Tate and Lyle in 1995, Kascol was effectively privatised.

The trend of private investments in agriculture has continued in recent years. In the ten-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 Zambia Development Agency (see Figure 2). [3]

Figure : Pledged investments in Agriculture, 2000 - 2009



Data source: Zambia Development Agency

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 Mpongwe Development Company, 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 US$ 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 stockfeed through its own retailing network throughout Zambia and West

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

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 hectarage under jatropha to 12,000. 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 $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.

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 small proportions 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/underutilized 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.

Another trend appears to be emerging. Government has recognised that one of the key constraints to the growth of commercial farming in the country is poor infrastructure and has come up with a land development programme that identifies and demarcates land and provides basic infrastructure and facilities such as trunk roads, bridges, electricity, dams, schools and health centers. A number of farm blocks have been identified (Table 1) for that purpose. These farm blocks are essentially virgin land and if the programme succeeds, investments in new farms is likely to increase. Most of the land in the farming blocks is being taken up by Zambian farmers. We are yet to see to what extent these areas will farm blocks developed into fully-fledged commercial farms.

Table : Farm blocks earmarked for commercial agriculture

Farm Block	Province	District	Size (Ha)
Nasanga	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)	Copper-belt	Mufulira	100,000
Muku	Lusaka	Kafue	100,000
Simango	Southern	Livingstone	100,000
Mwase-Phangwe	Eastern	Lundazi	100,000

Additionally, a good number of Zambians in urban areas, awaken 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 organizational and transactive configurations. Kascol organizational configuration 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 does not involve 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 Zambia Sugar Company. The original shareholders that partnered up with the Zambian government, particularly Barclays Bank (a purely private, profit-seeking entity), saw an opportunity for maximising shareholder wealth. The Commonwealth Development Corporation (CDC) and the Development Bank of Zambia, which were also involved as shareholders, had explicit development objectives. This led to the inclusion of the outgrower scheme in Kascol. 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), Mpongwe Development Company was not only a business opportunity but also a development opportunity, as can be gauged from its name.

The Kascol and MDC investment projects reflect a vision of agricultural modernisation through large-scale agricultural enterprises. They 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, Third National Development Plan , 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. As discussed, both Kascol and MDC were more recently privatised, reflecting a shift in national policy towards liberalisation and privatisation. In the case of Kascol, privatisation enabled associations of local farmers to acquire equity stakes in the company – as will be discussed below.

3.2 The impact of privatization

The privatization drive started in 1992 and was conducted within the wider context of economic liberalization and against a backdrop of apparent economic decline that started in the 1970s, barely a decade after gaining political independence from Britain. The main objective of economic liberalization was to arrest this economic decline and privatization was offered as the kingpin of that process. According to Cheelo and Munalula (2005), citing the World Bank, the immediate objectives of privatization were:

1. To scale down the Government's direct involvement in the operations of enterprises;
2. To reduce the administrative load associated with this direct involvement;
3. To minimize state bureaucracy in enterprise operations;
4. To reduce the costs of capital expenditure and subsidies from public funds;
5. To promote competition and improve efficiency of enterprise operations;
6. To encourage wide ownership of shares;
7. To promote the growth of capital markets;
8. To stimulate both local and foreign investment;
9. To promote new capital investment

In that regard, many state-owned enterprises were privatized, including Kaleya Smallholders and Mpongwe Development Company. As stated above, one of the immediate objectives of privatization was to improve efficiency of enterprise operations. This particular goal has generated a lot of interest and in Zambia attempts have been made to measure the impact of privatization 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 privatization on firm performance. They came up with the following conclusions:

1. There were significant differences in the performance of privatized firms between their pre- and post-privatization periods in terms of improvements in operating efficiency, capital investment (investment in land and building, and investment in plant and machinery).

2. The influence of liberalization was arguably more important in determining turnover and profitability performance than change of ownership (i.e., privatization).

3. Privatization had a negative impact on firm employment levels, at least in the short-term.

How do Kascol and MDC measure up to these conclusions? The impact of privatization on Kascol are not sharply defined because the company was, for all practical purposes, in private hands even before the privatization programme was embarked on. In fact, it was not even on the list of state-owned enterprises that were to be privatized. As stated elsewhere in this report, government had no direct equity stake in Kascol – it was a state enterprise to the extent that two of government controlled entities – Zambia Sugar Company and Development Bank of Zambia – had shares in it, 50% in total. Thus, when Zambia Sugar Company was privatized, the effect on the operational management of Kascol was minimal. The situation was, however different for MDC. Originally a joint venture between the Government of Zambia (GoZ) and CDC, the company was 60% owned by the Government of Zambia just before privatization (Kaunga, undated). After privatization, 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 1996/97, 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 privatization, perhaps because of the expansion programme that the company had embarked on soon after privatization which required an increase in manpower levels. In 1996, a number of young university graduates were recruited (including the author), 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. In the same year, however, it became clear that tough times lay ahead as CDC itself was facing eminent privatization and the financial return threshold for remaining in the CDC portfolio was to be raised.

Following the change in strategy within CDC, a number of assets in the agricultural business were sold off between 2000 to 2003 (Tyler, Undated), including Nanga Farms and York Farm in Zambia, but MDC was unaffected, implying that it was not immediately considered for disposal though plans to do so were still in the offing. The changes within CDC had a ripple effect on MDC and there was much discontent among employees, some of whom thought the company was no longer being well-managed. 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.

As to the impact of privatization on firm performance, it admittedly difficult to separate the impact of privatization from that of market liberalization. To say that privatization had an impact on company performance is equivalent to attributing performance to the form of ownership and control. While a causal relationship might exist, no study on the Zambian experience has successfully measured that relationship. That said, a World Bank Post-Privatization Study on 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, p. 6). This, apparently, was the case for both Mpongwe Development Company and Kaleya Smallholder Company.

There is a significant possibility that liberalization in general had a greater impact on company performance than privatization on Mpongwe Development Company, at least in the short term. For instance, an orientation towards the export market had a positive effect on company performance (Serlemitsos & Fusco, 2003). On the other hand, liberalization, by opening up the economy to increased competition, negatively affected the performance of many of the privatized companies that were totally dependent on the local market.

3.3 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 (2010), 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 (CSR), 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 and Cotula, 2010).

Ownership

The ownership structures of both Kascol and MDC present similarities and differences. Both companies started with similar owners. Kascol was originally owned by the government of Zambia (through Zambia Sugar Company, 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 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 (DFI), and is currently established as a company owned by the Department for International Development (DFID). CDC has had an economic development agenda for poor countries since its establishment in 1948. One of the objectives of CDC at the time of investments, it would seem, 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). CDC eventually divested from both Kascol and MDC.

Fieldwork for this study suggests that the understanding by Kascol outgrowers was that CDC shares would ultimately be sold or perhaps even donated to them. This was perhaps a misinterpretation by outgrowers of CDC's intention to divest from the company once fully established. When CDC eventually divested from Kascol, it sold its shares at market price. The outgrowers could only afford to buy a relatively small percentage of shares (13%) through a bank loan. The significance of this, however, is that 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.

Kascol outgrowers own their shares through a Trust – 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 Association, an association of cane growers who supply cane to Zambia Sugar Company Plc. The Mazabuka Cane Growers Association assists cane growers in Mazabuka District to improve cane production and productivity. It acquired its equity stake in Kascol through a donation from Zambia Sugar Company Plc, 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 Association 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 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).

As noted above, another important difference between Kascol and MDC is that the former but not the latter involves an outgrower scheme. Of the 4314.9 hectares of land held by Kascol through a long-term lease, about 1000 hectares are subleased to some 160 outgrowers (contract farmers) on the basis of 14-year rental contracts. Each outgrower has, on average, 6.5 hectares of land. Only about half (50%) of the 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 limit on how much land can be brought under cultivation. Processing facilities (a sugar processing plant located within a 10 km radius of the farm) are owned to Zambia Sugar Company, to which Kascol sells its entire produce.

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 board level, where the chairperson of Kaleya Smallholder Farmers Association is a member. The board is the highest decision- making organ of Kascol. The Kaleya Smallholder Farmers Association is a producer association which seeks to assist farmers in issues of production and outgrower welfare. Sources within the outgrower 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 of cane produced by the outgrower. Outgrowers are of the view that the 55% of the outgrower gross sales which goes to the company is more than its fair share of the proceeds. Since the Mazabuka Cane Growers Association 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 be the case, as the other members of the Mazabuka Cane Growers Association are independent commercial farmers who deal directly with Zambia Sugar Company (the buyer). I tis possible that the board representative from the Mazabuka Cane Growers Association is more inclined towards the interests of bigger commercial cane farmers than those of smallholder outgrowers. The smallholder outgrowers do not deal directly with Zambia Sugar Company because the transactions costs would be higher on the part of Zambia Sugar Company if it opted for that approach, and also because the smallholder outgrowers produce on contract with Kascol.

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 fulltime employee of Kascol, is engaged for that purpose. He is the link between smallholders and the company.

In contrast, 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 sugar cane that the company sales to Zambia Sugar Company. 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. Clearly, 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 number 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 ones 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 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).[4] 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. Our observations were that outgrowers had more assets (some even 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, rather than employees. Currently, no outgrower is also a Kascol employee. Some of the outgrowers were former employees who chose to become outgrowers. Those remain in employment presumably are individuals who prefer the certainty and regularity of wage income – or people who cannot afford to become outgrowers.

3.4 Constraints and success factors

The Kascol and MDC investment projects have faced some factors that have constrained their operations and others that accounted for their successes. Some of these factors are hereby considered, beginning with constraining factors and then moving on to success factors.

Low levels of financial returns

4 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.

While investments in the agribusiness may be profitable, returns on investment are generally low compared to other sectors of the economy. Low levels of financial returns in the agribusiness sector is what 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 that "*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, incidentally, 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 2011. Similarly, the average return for Zambia Sugar PLC – the single buyer of Kascol of cane – was 10% for the years 2010 and 2009. Note the contrast in the average return for Arcades Development, a newly established shopping mall in Lusaka, whose average for 2010 and 2009 was 27%.

Table : 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.

There is, however, 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.

High operating costs

As noted elsewhere in this report, Zambia has vast tracts of arable land which is not being utilized (except for gathering wild fruits and other forest products), but poor infrastructure in most parts of the country where this land is found makes agriculture investments in such land an expensive venture. Poor transport and communications infrastructure, absence of commercial services such as banking and suppliers of inputs, materials and operating requirements significantly increase operating costs. Additionally, 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. MDC, in the 1990s, had high vehicle maintenance costs due to the bad road leading to the nearest town, Luanshya.

Imbalanced power relations in the cane supply chain

The case of Kascol is that of many suppliers and a single buyer. There is only one buyer of cane in Mazabuka. This has created imbalanced power relations in the supply chain. The suppliers of cane are dependent on Zambia Sugar PLC , which can therefore dictate the price of cane supplied by cane growers. Outgrowers at Kascol complained that they are given the price at which their cane is sold and have no say in the setting of that price.

In spite of the constraints, there are many factors that made investors to continuing investing in Kascol and Mpongwe Farms, and the following are some of the key ones.

Favourable investment climate

The favourable investment environment created since the early 1990s when Zambia liberalized its economy has made continued investment in the case study businesses an attractive option. The section on Recent

Trends in Large Scale Agriculture Investments has outlined some of the factors that make investing in the Zambian Agriculture sector in general to be an attractive option. Following liberalization of the economy, MDC was able to set its own price of maize and soybeans and to export its commodities and earn its income in foreign currency at a time when the base lending rates in Zambian currency were over 50%. Among its international customers included Glencore International PLC and Otterbea. In 1996, all of its 3788 tons of soya crop was sold to Otterbea of South Africa.

Comparatively low transaction costs in the outgrower scheme

The often stated downside of contract farming systems involving a big number of small outgrowers is high transactions cost. Kascol, however, has managed to keep these costs at manageable levels because 1) the outgrowers are geographically concentrated on one farm which makes it easier to provide them with extension services and to supervise their farming activities; 2) 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 3) outgrowers do not have alternative buyers of cane and this prevents from side-selling their cane.

4. SOCIOECONOMIC OUTCOMES

Whilst the socioeconomic 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 socioeconomic 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 socioeconomic 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 the 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 ten 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, EdAssist Database, 2002). 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 (Zambia Sugar Company, 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 centers, however, were very few, and perhaps only the Zambia Institute for Animal Husbandry was within the project area. A farmer-training centre that catered to the needs of the entire Mazabuka district existed about 60 km 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 Zambia Sugar Company, 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 ten 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 2). 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.

Figure 2: Wage employment in Zambia, 1972 -1980

Source: Data from CSO, 1986

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 underwent a restructuring process which led to over half of the employees being laid off and salaries being reduced for those who remained. Apart from those who work directly on the farm, Kascol also runs a clinic which employs four staff. Besides permanent staff, Kascol employs between 250 and 350 seasonal workers, mostly cane cutters. These seasonal workers are employed for up to 8 months in a year and, as such, receive an income for two-thirds of the year. The ratio of workers to area cultivated in hectares is about 0.38, or 38 workers per 100 hectares.

Between 2004 and 2007, MDC employed an annual average of 457 full time workers and 1,082 seasonal workers – a combined average of 1,539 workers per annum. This figure translates to roughly 38% of all salaried employees in the district in the 2000s.[5] The figure in terms of workers per cultivated land in hectares is 0.14 or 14 workers per 100 hectares, 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. At the time of interviews (July 2011), the company had 520 permanent staff and 1,200 seasonal workers.

These figures are certainly low by international standards, though still 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/general 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. [6] In the same year, the average wage of an unskilled, unionised worker at MDC was ZMK 300,000 (USD 87.81). 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 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

5 This figure has been estimated by taking into account a population of 64,371 in 2000 for Mpongwe District (CSO, 2000) and a wage employment rate of 6.3% in rural Zambia, according to 2000 national census.

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

employed in the agricultural sector (CSO, 2005), 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), less than half what they used to get in 2005.[7] 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 MDC (now Zambeef Mpongwe Farms), where unionised workers get a minimum of ZMK 419,000 (USD 88.48) per month. This figure is the legal minimum wage obtaining in the country. Based on the above figures, it would seem that Kascol is paying less than the legal minimum wage for staff in non-management positions. As noted elsewhere in this report, those interviewed could not disclose the salaries of management staff.

Who gets the jobs

For both Kascol and MDC, management jobs are predominantly held by individuals who come 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) are migrant labourers from other parts of the country, Western Province in particular. This has 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. Similarly at MDC, during coffee picking years, the company used to hire coffee pickers from other districts. In 2011, the company had 121 locals in permanent employment (out of the 518) and most of the seasonal workers are locals (Mpongwe community members).

From a gender perspective, a parallel study on gender in large-scale agricultural investment, also supported by FAO and steered by IIED, suggests that Kascol does not have a deliberate policy for affirmative

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

action or promoting gender equity in decision-making positions, though some efforts are being made to encourage women applicants once a vacancy arises (Wonani, in press). Thus, out of 78 permanent employees, only 8 (10%) are female. Table 3 below shows the positions held by female staff in the Kascol. The situation is slightly better with regard to outgrowers, as 27% of the smallholder outgrowers are female, though it is possible that the larger proportion of female smallholder outgrowers is linked to inheritances arising from the demise of the original male smallholder outgrowers.

Table : Numbers and positions of female staff in Kascol

Position	Number of Staff
Management Accounting Officer	1
Agriculture Management Trainee	1
Human Resources Assistant	1
Environmental Health technologist	1
Nurse	1
Secretary	2
Zone Leader	1

Source: Wonani, 2012

Livelihood opportunities other than direct employment

As discussed, Kascol has contracted 160 outgrowers who supply the company. These outgrowers have annual sales of up to ZMK 60,000,000 (about USD 12,669.6) each. After deducting the cost of fertilisers and chemicals (average of ZMK 26,000,000, 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 sugar cane is variable and when the harvest is poor, or when there 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 year, Kascol gives an “advance” (that is, a loan) of ZMK 1,000,000 (USD 211) to the farmer. The price of sugar cane is set by Zambia Sugar Company, which takes into account several factors including the demand for sugar on the local and international market.

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 0.5 hectares 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. There are more men (73%) than women (27%) among the 160 outgrowers. 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.

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 cane production, farm management and good citizenship. Workshops and seminars are also held on matters relating to the health of outgrowers (e.g. HIV/AIDS). MDC / ETC BioEnergy only provides training to its 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 the study author in the same areas found that smallholders who get occasional employment with the company tend to have higher productivity than those that do not (FinScope MSME Study, 2008).

4.3 Impact 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. MDC's contribution to food security in the nearby towns on the Copperbelt Province is significant. Though data on MDC's maize production is unavailable, we can gauge its contribution by considering aggregate production data at the district level. In 1996/97, for instance, Ndola Rural District, where MDC is located,[8] contributed about 80% of the total maize produced on the Copperbelt (Table 4). In other words, one district produced virtually all the maize crop in the province.

Table : Maize production estimates, Copperbelt Province, 1996/97

District	Expected Production (MT)	% 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	42410.34	80%
Total	53102.07	100%

Data Source: CSO Crop Forecast Survey

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

Maize production estimates for 2004/2005 makes 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% and this was the highest production level in the region (see Table 5).

Table : Maize production estimates, Copperbelt Province, 2004/2005

District	Farmer Category	Expected Production (MT)	% Production
Chingola	Large Scale	9708.89	9%
Chingola	Small Scale & Medium	1081.04	1%
Kalulushi	Large Scale	770.35	1%
Kalulushi	Small Scale & Medium	1524.24	1%
Kitwe	Large Scale	453.86	0%
Kitwe	Small Scale & Medium	1743.99	2%
Luanshya	Large Scale	68.4	0%
Luanshya	Small Scale & Medium	6741.56	6%
Masaiti	Large Scale	2765.93	2%
Masaiti	Small Scale & Medium	8094.12	7%
Mpongwe	Large Scale	51761.8	45%
Mpongwe	Small Scale & Medium	14224.89	12%
Mufulira	Large Scale	307.8	0%
Mufulira	Small Scale & Medium	1534.44	1%
Ndola	Large Scale	510.2	0%
Ndola Urban	Small Scale & Medium	6379.9	6%
Total		113943.25	100%

Data Source: CSO Crop Forecast Surveys

4.4 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 $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 Water Board by Kascol is ZMK 68 million (USD 14,358.90). Payments for ground rent, water rights and tax go 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 organizations on billboards in their districts. A breakdown of public revenues provided by Kascol in 2010 is presented in Figure 3.

Figure 3: Kascol's contribution to public revenues (2010)

Data source: Kascol

ETC BioEnergy, on the other hand, has an agreement with the Government of the Republic of Zambia – the Investment Protection and Protocol Agreement – whereby 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 6 below.

Table : 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

Data source: ETC BioEnergy

ETC BioEnergy also pays annual water rights and the 2010 figure was ZMK 43,442,000 (USD 9,173.22). Figure 3 shows that the biggest proportion of ETC BioEnergy's payments is for ground rent. The volume of water utilised by ETC is 102,000 m^3 / day. The cost of the water rights is calculated on the basis of water volumes as follows:

- Up to 500m^3 per day: ZMK 5000 (USD 1.06) per day;
- For every m^3 above 500m^3/day: ZMK 2 (USD 0.0004) per m^3;
- Charge for registration: ZMK 2000 (USD 0.42).

FIGURE 4. ETC BIOENERGY'S CONTRIBUTION TO PUBLIC REVENUES (2010)

Comparatively, Kascol, though the smaller of the two projects, contributes more to public revenue than ETC BioEnergy, on the basis of the 2010 figures. In 2010, Kascol contributed a total of USD 155,836.26, compared to ETC BioEnergy's USD 56355.89. For every hectare developed, Kascol contributed USD 68.79 to public revenues, compare to ETC BioEnergy's USD 5.92 (see Table 7). 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 liquation in 2006. It is possible that MDC, prior to liquation, was contributing more to public revenues than ETC BioEnergy.

Table : A comparison of Kascol and ETC contributions to public revenue (2010)

	Ground rent	Corp. Tax	Water rights	Local authority	Total Public Revenue	Ratios	
						Public revenue to developed land	Public revenue to total land
Kascol	27,450.83	105580.1	14358.9	8446.41	$155,836.26	$68.79/ha	$36.12/ha
ETC	47183.67		9172.22		$56355.89	$5.29/ha	$1.20/ha

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).

4.5 Social and environmental impacts

Though agriculture is a beneficial and desirable activity, it often brings with it 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 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 (PTS), water pollution, hazardous waste, and ozone depleting substances (ODS).

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 fertilizers and some of this fertilizer certainly finds itself in areas beyond the farms through such means as running water, seepage into underground water systems and evaporation. Mpongwe Development Company 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 container are a real danger to the surrounding communities who pick up these containers and start reusing them such things as water and food storage. The villagers are often not aware of the dangers inherent in the use of such containers.

Kascol is guilty of polluting the atmosphere through the burning of sugar cane plantations in readiness for harvest. This is done annually and is a source of particulate matter (smog) and of oxides of nitrogen (NOx). Further, some environmental concerns may not directly be addressed by ZEMA. A study by German et al (2010) revealed that industrial-scale biofuel plantations negatively impact the environment through deforestation, for example. In this regard, it is reasonable to conclude that the jatropha plantation developed by ETC BioEnergy contributed to deforestation. From the resource point of view, the abstraction of water for irrigation purposes is certainly 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 2000 hectares must have a telling effect on the resource.

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 the social impact, 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. It is, however, worth noting that no involuntary resettlement was involved, as the land was acquired from existing commercial operations or through deals negotiated with local landholders (see above). The area which is now Mpongwe farms was unoccupied when it was being acquired, even though the nearby villages claimed ownership of it and it was communally used for gathering forest resources. As noted earlier, permission had to be sought from the Chimbamanga family in order to have land allocated to Mpongwe Farms in the Nampamba area.

However, though at the time of allocation of land to Mpongwe farms the villagers saw no serious problems, 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 big commercial farms that have been established in the area, e.g. Dar Farms, which is said to have about 76,000 hectares, in addition to the area taken up by MDC.[9]

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 of 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

9 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.

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 residents of Chief Ndubeni's area, the blame for these tensions is also on their chief who, in pursuit of personal gain, has continued to give out land to investors in exchange for gifts, with little regard to the needs of his subjects. Worse still, he 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 the members of the focus group discussion at Kantatamo Market in Chief Ndubeni's area. The loss of control that the villagers were referring to is the chief's inability to give land to investors once the villagers get leasehold title. Without leasehold title, the chief can 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 the villagers to get back land that is held on leasehold title.

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 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.

Besides land scarcity, other types of adverse impacts on local communities are also possible, but they could not be documented by this research. For example, 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.

5. SOME THOUGHTS ON FUTURE QUANTITATIVE STUDIES IN AGRICULTURAL INVESTMENTS

One of the challenges faced by this study was data availability. Undoubtedly, this was related to the choice of companies for the case studies. The case study companies are private entities not listed on the stock exchange. As such, they do not make their financial data public. A quantitative study would benefit a lot if it involved publicly listed companies. Unfortunately in Zambia, like many other African countries, there are very few agribusiness companies that are listed on the stock exchange and make their data publicly available. Currently, there are only two such companies in Zambia – Zambeef Products Plc and Zambia Sugar Plc.

A difficult related to collecting data from private companies is assurance of confidentiality. Management of private companies want to be assured that data made available to the researcher will be kept confident, and they would not want their identity to be made public. Notwithstanding cost implications, this may be achieved much more easily when a bigger sample of companies is involved in a study than one or two case studies. The confidentiality challenge is not that big when obtaining data from rural small scale farmers.

It would be interesting for future studies to carry out quantitative analyses of externalities of large scale agricultural production. Externalities are benefits and costs sustained by others as a result of a company’s activities. The economic cost to communities and the larger economy of holding unused land by large scale agricultural entities could also be investigated. Such studies could also be extended to individuals who hold huge tracts of unused land. It has become fashionable for many to obtain huge tracts of land which then stay idle for a long time. This creates artificial shortages of land.

Often, the financial returns of large scale agricultural investments are not known. Future studies could consider investigating the financial returns of agribusiness in Africa. Such studies could include the cost of developing a large scale farming operation. Comparative analysis of the performance of agribusinesses and firms in other sectors could also be done. Other studies could target sources of equity capital for agribusinesses in agriculture.

6. CONCLUSIONS AND RECOMMENDATIONS

This final part of the report gives the conclusions and recommendations. Recommendations are given by first summarising a practice to emulate or a lesson to avoid and then suggesting a recommended course of action.

6.1 CONCLUSIONS

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 socioeconomic impacts of the projects on local livelihoods at the time of their establishment (for example, with regard to impacts linked to loss of land), 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. This characteristic makes 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.

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 Zambia Sugar Company brought production and management expertise, while the 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. Current company management believes the company (that is, ETC BioEnergy) is making a sufficient return on investment to satisfy the shareholders. Even though MDC went into liquation 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. Presumably, the company was liquidated instead of being sold as a going concern because its owners believed there was more value in selling a ‘dead cow than a live one’ – they may have gotten more by selling individual assets than by selling the company as a going concern.

Both companies are large employers in the Zambian context, but overall job numbers have remained small compared to the rural labour force. 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.

More specifically, investments that include low-income groups as producers in the supply chain and as shareholders in decision making and profit sharing are 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. But mechanisms can be developed to manage some of these risks, particularly with regard to crop insurance.

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. MDC 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.

6.2 OBSERVATIONS AND RECOMMENDATIONS

These case studies have demonstrated that large-scale investments in agriculture have beneficial impacts on the poor, largely on three fronts – the first one is through contributions to the nation’s gross domestic product (GDP), the second one is through direct provision of income to the low income, and the third is through access to social services. However, large-scale investment in agriculture can also negatively impact on the poor by limiting access to their most important asset – land.

Observation: 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 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.

Recommendation: 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.

Observation: Consistent with previous studies on privatization e.g. Cheelo and Munalula (2005), employment levels and/or conditions of service generally fall after privatization. The decline in employment is likely to persist when there is no significant growth in the size of firm.

Recommendation: Improvements in efficiency that accompany privatization should be followed by action to support firm growth in order to generate new jobs. Firm growth will most likely require that investors actually inject into the company the amounts pledged during the bidding process. Effective monitoring and enforcement of the contractual relationship by government authorities plays an important role in this.

Observation: The country as a whole has abundant arable land, but access to arable land by poor people is increasingly becoming difficult in some places.

Recommendation: Land policy should strike a balance between the need for agricultural investments and the interest of poor farmers. Before any land is allocated to an investor, government should take into account both the present and future land needs of local people. The impact of large-scale investments on demographic changes should also be taken into account in estimating future land needs. Ideally, the discipline of town and country planning should be developed to the extend where it takes into account the peculiar conditions that obtain in rural areas. With increasing population and the need for rural investments, it is becoming clear that land use planning should be extended to rural areas. 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.

Observation: There is a tendency for investors to take up large tracks of land which they do not fully utilize, and by doing so, they create artificial shortages of land in some cases.

Recommendations: Investors should only obtain land that they can utilize within a reasonable span of time. Unnecessary deprivation of the poor of access to land is socially and economically irresponsible. Government should proactively protect the rights of the poor by ensuring that investors do not hold on to land they do not utilize for many years. Mechanisms should be in place to only allocate to investors land that they can utilize within a reasonable span of time, and to withdraw land from investors that do not comply with agreed development plans.

Observation: A key enabling factor in the initial stages and in the ultimate successes of the Kascol and Mpongwe investment projects was the association with the Commonwealth Development Corporation (CDC). CDC provided investment funds and managerial expertise to both companies in return for comparatively low levels of financial returns. Though not set up as a development aid agency, CDC was in practice 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 were financial returns were too low, too distant or too risky to attract capital flows from private investors. The British government did not required it to make a profit beyond that needed to service its debts (Tyler, Undated).

Recommendation: Strategically targeted development aid can play an important role in promoting commercially viable and socially inclusive models of agricultural investments.

Observation: Investment projects that include low-income groups as producers in the supply chain and as shareholders in decision making and profit sharing are more promising than models that only involve the poor as wage labourers.

Recommendation: In countries where governments are genuinely committed to poverty reduction, this observation creates 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.

Observation: The outgrower scheme at Kaleya Smallholder Company has managed to keep at manageable levels the transactions costs that arise from dealing with a large number of outgrowers by avoiding the geographical dispersion of outgrowers. It has done this partly by keeping all the outgrowers on the company estate.

Recommendation: While the overall number of Kascol outgrowers is limited, this experience shows that collaborative models are possible and can be commercially viable. This experience 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.

References

Banda, C. T. (2011). *Institutional, administrative, and management aspects of land tenure in Zambia.* Retrieved October 2011, from http://dlc.dlib.indiana.edu/dlc/bitstream/handle/10535/7622/Institutional,%20administrative,%20and%20management%20aspects%20of%20land%20tenure%20in%20Zambia.pdf

Central Stastical Office. (1990). *1990 Census of Popilation and Housing.* Lusaka.

Cheelo, C., & Munalula, T. (2005). *The Impact of Privatization on Firm Performance in Zambia.* UNZA.

Clarke, G. R., Munro, J., Pearson, R. V., Shah, M. K., & Sheppard, M. (2010). *The profile and productivity of Zambian Businesses.* GRZ, Zambia Business Forum, FinMark Trust and the World Bank.

Cotula, L., & Vermeulen, S. (2010). *Making the most of agricultural investment: A survey of business models that provide opportunities for smallholders.* London/Rome/Bern: IIED/FAO/IFAD/SDC.

Cotula, L., & Vermeulen, S. (2010). *Making the most of agricultural investment: A survey of business models that provide opportunities for smallholders.* London/Rome/Bern: IIED/FAO/IFAD/SDC.

CSO. (2003). *2000 Census of Popilation and Housing.* Lusaka.

CSO. (2004). *2004 Living Conditions Monitoring Survey.* Lusaka: Central Statistical Office.

CSO. (2011). *2010 Census of Population and Housing Preliminary Results.* Lusaka: Central Statistical Office.

CSO. (1986). *Country Profile.* Lusaka: Central Statistical Office.

CSO. (1986). *Labor Force Survey.* Lusaka: Central Statistical Office.

George, G., & Bock, A. J. (2011). The Business Model in Practice and its Implications for Entrepreneurship Research. *Entrepreneurship Theory and Practice , 35* (1), 83-111.

German, L., Schoneveld, G., Skutch, M., Andriani, R., Obidzinski, K., Pacheco, P., et al. (2010, December). *The local social and environmental impacts of biofuel feedstock expansion: A synthesis of case studies from Asia, Africa and Latin America.* Retrieved October 2011, from Cifor InforBriefs.

GRZ. (2011). *Agriculture Statistical Bulletin*. Retrieved October 2011, from http://www.countrystat.org

GRZ. (2009). *Economic Report.* Lusaka: GRZ, Ministry of Finance and National Planning.

GRZ. (2002). EdAssist Database. Lusaka: GRZ, Ministrty of Education.

GRZ. (2002). *Poverty Reduction Strategy Paper.* Lusaka: GRZ.

GRZ. (2011). *Sixth National Development Plan.* Lusaka: GRZ.

GRZ. (1979). *Third National Development Plan .* Lusaka: National Commission for Development Planning.

Kaunga, E. C. (undated). Retrieved February 2012, from Privatisation: The Zambian Experience: http://unpan1.un.org/intradoc/groups/public/documents/aapam/unpan028227.pdf

Leonard, R., & Cotula, L. (Eds.). (2010). *Alternatives to land acquisitions: Agricultural investment and collaborative business models, IIED/SDC/IFAD/CTV, London/Bern/Rome/Maputo.*

Roth, M., Khan, A. M., & Zulu, M. C. (n.d.). *Legal Framework and Administration of Land Policy in Zambia.* Retrieved October 2011, from http://www.aec.msu.edu/fs2/zambia/resources/Chapter1.pdf

Scoones, I. (1998). Sustainable Rural Livelihoods: A Framework For Analysis. *IDS Working Paper 72* .

Serlemitsos, J., & Fusco, H. (2003). *Zambia Post-Privatization Study.* Washington DC: The World Bank.

Tyler, G. (Undated). *Background paper for the Competitive Commercial Agriculture in Sub–Saharan Africa Study.* Retrieved 2012, from http://siteresources.worldbank.org/INTAFRICA/Resources/257994-1215457178567/CCAA_Colonial.pdf

UNDP. (2010). *Business Solutions to Poverty– How inclusive business models create opportunities for all in Emerging Europe and Central Asia.* UNDP Regional Bureau for Europe and the Commonwealth of Independent States.

Wonani, C. (in press). *GENDER DYNAMICS OF LARGE SCALE INVESTMENT INCLUDING INCLUSIVE BUSINESS MODELS IN AGRICULTURAL LAND: THE CASE OF KALEYA SMALLHOLDER COMPANY LIMITED (KASCOL).*

ZPA. (Undated). *Bound copies of press releases.* Lusaka.

ZPA. (Undated). *Zambia Privatization Agency Bound Copies of Press Releases.* Unpublished.

ZSC. (2011). *Zambia Sugar PLC Annual Report 2011.* Mazabuka: Zambia Sugar PLC.