

Blurring the Lines between Aid and Business in the Agricultural Technology Demonstration Centre in Zimbabwe¹

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This Working Paper series emerges from the China and Brazil in African Agriculture (CBAA) programme of the Future Agricultures Consortium. This is supported by the UK Economic and Social Research Council's 'Rising Powers and Interdependent Futures' programme (www.risingpowers.net). We expect 24 papers to be published during 2015, each linked to short videos presented by the lead authors.

The CBAA team is based in Brazil (University of Brasilia, Gertulio Vargas Foundation, and Universidade Federal do ABC), China (China Agricultural University, Beijing), Ethiopia (Ethiopian Agricultural Research Institute, Addis Ababa), Ghana (University of Ghana at Legon), Mozambique (Instituto de Estudos Sociais e Económicos, Maputo), Zimbabwe (Research and Development Trust, Harare), the UK (the Institute of Development Studies, the International Institute for Environment and Development and the Overseas Development Institute).

The team includes 25 researchers coming from a range of disciplines including development studies, economics, international relations, political science, social anthropology and sociology, but all with a commitment to cross-disciplinary working. Most papers are thus the result of collaborative research, involving people from different countries and from different backgrounds. The papers are the preliminary results of this dialogue, debate, sharing and learning.

As Working Papers they are not final products, but each has been discussed in project workshops and reviewed by other team members. At this stage, we are keen to share the results so far in order to gain feedback, and also because there is massive interest in the role of Brazil and China in Africa. Much of the commentary on such engagements are inaccurate and misleading, or presented in broad-brush generalities. Our project aimed to get behind these simplistic representations and find out what was really happening on the ground, and how this is being shaped by wider political and policy processes.

The papers fall broadly into two groups, with many overlaps. The first is a set of papers looking at the political economy context in Brazil and China. We argue that historical experiences in agriculture and poverty programmes, combine with domestic political economy dynamics, involving different political, commercial and diplomatic interests, to shape development cooperation engagements in Africa. How such narratives of agriculture and development – about for example food security, appropriate technology, policy models and so on - travel to and from Africa is important in our analysis.

The second, larger set of papers focuses on case studies of development cooperation. They take a broadly-defined 'ethnographic' stance, looking at how such engagements unfold in detail, while setting this in an understanding of the wider political economy in the particular African settings. There are, for example, major contrasts between how Brazilian and Chinese engagements unfold in Ethiopia, Ghana, Mozambique and Zimbabwe, dependant on historical experiences with economic reform, agricultural sector restructuring, aid commitments, as well as national political priorities and stances. These contrasts come out strikingly when reading across the papers.

The cases also highlight the diversity of engagements grouped under 'development cooperation' in agriculture. Some focus on state-facilitated commercial investments; others are more akin to 'aid projects', but often with a business element; some focus on building platforms for developing capacity through a range of training centres and programmes; while others are 'below-the-radar' investments in agriculture by diaspora networks in Africa. The blurring of boundaries is a common theme, as is the complex relationships between state and business interests in new configurations.

This Working Paper series is one step in our research effort and collective analysis. Work is continuing, deepening and extending the cases, but also drawing out comparative and synthetic insights from the rich material presented in this series.

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Abstract

In recent years, tremendous attention has been given to China's burgeoning agricultural engagements in Africa. Due to limited access to these engagements, most discussions have focused on macro-level discourse analysis as well as political and economic analysis on its impacts. Little research of an anthropological nature has been undertaken at the micro-level operation of ongoing projects, taking note of the nature of interactions between the donors and local counterpart staff within a given cultural setting. This article focuses on a Chinese-Zimbabwe Agricultural Technology Demonstration Centre (ATDC) to provide insights into the daily activities, interactions and cultural encounters with locals. Ethnographic methodologies are used to examine the Chinese and Africans' activities, ideas and dialogues at the Demonstration Centre to present through empirical observations how China's macro strategy is implemented in actual practices of staff and local partners at the ATDC in Zimbabwe.

Keywords: Chinese aid to Africa, Agricultural aid to Africa, Agricultural Technology Demonstration Centre

Introduction

Our Centre is a very complicated institution: We have to fulfil the aid tasks of trainings, technology demonstration, and receptions for the Chinese government; we need to fulfil the business tasks to make profit to sustain the Centre; and we also have to serve the Zimbabwe government. We have three bosses. (Director, Agricultural Technology Demonstration Centre)

Chinese Agricultural Technology Demonstration Centres (ATDCs) are designed to be aid programs operated by companies. In Zimbabwe, this design requires Chinese staff to perform dual roles as aid workers and businesspeople, leading to blurred identities and expectations among Chinese actors, and misunderstandings among local Zimbabwean partners. In practice, Chinese staff and local partners try to overcome these challenges despite limited capacity and support, but the inherent design of the ATDC model remains a barrier to fully achieving the goal of a financially sustainable Centre contributing to increased food security. This research aims to provide insight into this dilemma through empirical exploration of the ATDC in Zimbabwe, based on two months of fieldwork conducted over two trips in 2013 and 2014.

China's increasing engagement with Africa through aid, trade and investment is now a well-documented trend (Buckley 2013). There has been a growing interest in understanding the implications of China's aid to African countries since 2005. This increase in scholarly interest derives largely from the concern that China's brand of

aid mixed with other financial flows and market dynamics potentially negatively impacts economic growth and development in Africa (Power et al. 2012). Existing research focuses on the motivation of the Chinese government, but there is little research into what Chinese are actually doing on the ground. Alden (2007) summarised three divergent narratives describing China's engagements in Africa as follows: 1) China as coloniser and threat to Africa's development, especially in land and resource-related engagements such as agriculture; 2) China as economic competitor; and 3) China as development partner, emphasising the value of China's development experience and opportunities for supporting African countries to follow a similar path. Chinese political-economic motivations behind aid include solidifying and promoting relations with African states, and garnering business opportunities. However, it is unclear how these motivations are actually playing out on the ground through existing agricultural engagements. The objective of this research is to present how China's macro strategy is implemented, through presentation of empirical observations of the actual practices of staff and local partners in the ATDC in Zimbabwe.

Our research team consisted of two researchers from the China Agriculture University. We lived in the ATDC together with eight Chinese staff for two months, implementing ethnographic-style participatory observation research methodology. We conducted unstructured interviews with all Chinese staff, some local workers including kitchen cleaners, security guards, tractor drivers, fixed agricultural workers and casual workers. We also went to Harare to interview Chinese embassy staff, staff of the Zimbabwean Ministry of Agriculture, Mechanisation and Irrigation Development and managers of other Chinese agricultural companies. During our stay at the ATDC, we also observed visits from an international aid delegation, a local farmer organisation, local commercial farmers and politicians and a delegation from MOFCOM. We were involved in the preparation for and reception of these visitors, and also interviewed them. In addition, upon our return to China, we interviewed stakeholders in Beijing from the Chinese Ministries of Agriculture and Commerce. All interviews were conducted in Mandarin Chinese or English, and no translators were employed.

Blurred lines between aid and business in the model of Chinese ATDCs

ATDCs are a new modality for Chinese agricultural aid to Africa. They were initiated in Beijing in 2006 at the third Summit of the Forum on China-Africa Cooperation (FOCAC). The ATDCs aim to transfer Chinese agricultural technology and development experience to promote agricultural development and to resolve food security problems in Africa. The operational model of the ATDCs

is to employ Chinese companies and institutes, generally selected via a competitive tender system in China, to build and operate the Centres for at least three years under a Chinese grant. During this time the companies are encouraged to seek out ways for the Centres to earn income and become self-financing. They are also encouraged to investigate other business opportunities (Bräutigam and Zhang 2013). The host countries provide ATDCs with a small farm area for piloting and demonstrating Chinese technologies. In practice, the companies and institutes manage the farms for modest profits to support the operational costs of the Centres before they find alternative business opportunities. These Centres have been highly sought after by African leaders. As a MOFCOM official in Beijing explained in an interview,

After we pledged support to build ten Demonstration Centres in Africa at the 2006 FOCAC summit, many African countries submitted requests for the Centres. As the requests to host these Centres were overwhelming, we increased the number of pledged Centres from the original 10 to 14, and it is apparent that African countries hope that China would build one such Centre in each country.

Since its inception that figure has now jumped even higher, with 25 such Centres reported to have been built by 2013 (Tang 2013).

At the diplomatic level, the ATDC is seen as an innovative modality to promote China-Africa agricultural cooperation targeting agricultural development in Africa through China's technology and equipment. The Chinese government hopes that the ATDC model can break the vicious cycle in traditional aid modalities of 'build-transfer-suspend-reinvest-retransfer-resuspend'. For this reason they have included companies as the operational body in the design of the ATDC model. The Centres have three requirements: first, they need to attract interest and demonstrate the new technology; second, they need to have a training component for local peasants; and third, they need to be sustainable (Bräutigam and Tang 2009).

Chinese policymakers acknowledge that using an agribusiness model to achieve development aid comes with risks and uncertainties, and integrating the non-profit and profit-making functions remains a challenge (Buckley 2013). Indeed, the Chinese government has taken some measures to ensure the public services of ATDCs are achieved, such as setting a minimum number of trainees to 120 persons per year. There are also monitoring and evaluation procedures, such as a requirement to submit monthly and annual reports to MOFCOM and the Chinese Ministry of Agriculture (MOA). In 2012, MOFCOM and MOA jointly evaluated the performance of the ATDCs in 4 African countries, placing equal weight on the economic sustainability of operations as on contributions to local agricultural development. Further, MOFCOM and MOA jointly organised internal discussion workshops in 2012 and 2013 on how to keep a balance between public

service and business activities. All ATDCs in Africa were required to participate and present their experiences and difficulties. The officials from different divisions and departments of MOFCOM and MOA, provincial governments, China Development Bank, China Export-Import Bank and China-Africa Development Fund were also invited to attend. The senior officials at the meeting emphasised both the public services and economic sustainability of the ATDCs.

The ATDC model aims to make foreign aid interventions sustainable by linking with commercial opportunities for Chinese companies. Under this model, the Chinese companies are asked to use the three years of support from the Chinese government to explore operating in an economically sustainable, commercial and mutually beneficial way (Bräutigam and Tang 2013). This means that the Centre has dual functions and is required to play two roles: as a demonstration Centre, it needs to have demonstration and training components to promote local agricultural development; while as a company, it needs to ensure business profits to sustain operations.

These two functions seem contradictory from the outside; however, they follow an internal logic developed in China's own development experience of employing State Owned Enterprises (SOEs) to achieve State goals. Indeed, the Centres adopted the Chinese management framework of 'one identical institution under two different names' (一个机构两块牌子), which is a special administration and management model employed successfully in China in separating Party from government work, and separating government from enterprise management functions. Under such a management structure, when an institution has two names for different identities, it uses its appropriate name to meet the work needs depending on the context.

Blurring the lines between aid and business on the ground in Zimbabwe

Zimbabwe-China relations date back to Zimbabwe's (then Rhodesia's) struggle for independence when the then main guerrilla movement, the Zimbabwe African National Union (ZANU), established links with the Chinese Communist Party. Through this linkage, China provided arms and other logistical support to the armed struggle. Zimbabwe adopted a 'Look East Policy' following its isolation by the West after embarking on a land reform programme in 1999, and held China as an 'all-weather friend'. Reaffirming its friendship with Zimbabwe, China, at the request of Zimbabwe, has entered into a number of agricultural cooperation programmes, including the provision of 4,910t of rice and 9,723t of wheat as emergency food aid in 2012; a donation of agricultural machinery comprising 10 farm trucks, 30 walking (two wheel) tractors and 50 water pumps; a loan agreement with the China Export-Import Bank; the training of key staff in Zimbabwe's Ministry of Agriculture; and

dispatching of Chinese agricultural experts on various missions (Mukwereza 2013). China's leadership sees Zimbabwe as among its closest partners, and the country was among the first recipients of an ATDC. The Centre in Zimbabwe is now one of 25 ATDCs in 24 countries across the African continent.

We arrived at the ATDC in Gwebi late in the evening after a 25-hour flight directly from Beijing, and a two-hour drive from Harare airport. We were greeted by a full welcoming banquet thrown by the ten Chinese staff. The dining room had a large round table filled with Chinese dishes cooked by the staff themselves, using vegetables they grew themselves or bought from the local market, and African beer and wine. Chatting away in Chinese with the staff, surrounded by Chinese furniture and food, it felt like we had come on a very long journey and never left China. This feeling continued when we went to our rooms and saw that everything there was Chinese too: the air conditioners, furniture, TVs and electrical outlets. They even provided us with Chinese soap, shampoo, mosquito repellent and toilet tissue! Before we went to Zimbabwe, we expected the living conditions to be rough, but it was like a nice Chinese hotel.

The next morning we woke to find a beautiful Chinese garden surrounding a half dozen modern two story buildings. They were organised as a dormitory and living areas with kitchen and dining room; administrative areas with offices, meeting rooms, training rooms and laboratories; a harvest processing area, including a warehouse and storage; and a shelter for a handful of large tractors, combines, harvesters, ploughs, seed sowers, pesticide sprayers, a flue-cured tobacco baling machine, etc.

There was a beautiful swimming pool and a local style thatched roof barbeque rest area. The most astonishing to us was the huge garden with flowers and trees, and iron rod fencing allowing passers-by to see through, with lights on the paths. In China, our agricultural centres are just functional, not beautiful. This place impressed us with how clean and organised it was, with everything in place. Only Zimbabwe's national flag fluttering in the wind next to the Chinese flag in front of the administrative building reminded us that we were actually in Zimbabwe.

A Chinese agricultural machinery company gained the bid for constructing the ATDC in Zimbabwe, and started infrastructure construction in 2009. In 2012, China and Zimbabwe held a ceremony to officially open the Centre following completion of construction. The company imported agricultural machines from China to run the Demonstration Centre. Some of the machines were brought in simply for display, such as the flue-cured tobacco baling machine. Others are used for farming operations in the field.

The Demonstration Centre was allocated an area of 74ha about 300m away from the office and residential complex for field operations. Every year, the farm is mainly used for potato, soybean and maize cultivation in the

rainy season and for wheat and potatoes in winter. The company dispatched ten Chinese working staff to manage the Centre. The Zimbabwean Ministry of Agriculture appointed a local management team for the Demonstration Centre, and a separate office to support their work. The team includes the Director and Deputy Director of the Department of Agricultural Education and Training, Deputy Director of the Department of Agricultural Mechanisation and Engineering, and the Principal of Gwebi Agricultural College. 'To be specific,' explained one ATDC staff member, 'relying on the Demonstration Centre, we registered an agricultural company which shares the same working staff and management personnel with the Centre. The company uses the Centre's name when it performs the function of public services, and adopts the company's name when it conducts commercial operations.'

According to our field research, during its operation over the past year, the Demonstration Centre has carried out the following public service activities: First, pilot demonstration, including the experimental cultivation of nearly 20 kinds of local maize seeds in cooperation with local seed companies, the experimental cultivation of a dozen varieties of potatoes jointly with domestic potato research institutes and the promotion of diced potato cultivation technology; second, agricultural exhibition and presentation, including presenting agricultural machinery at various agricultural shows held in the country under the auspices of the Zimbabwean Ministry of Agriculture; third, receiving visiting delegations, including students of Zimbabwe's agricultural colleges; and fourth, organising trainings. The Centre successively trained a group of farmers on agricultural machinery as well as a farmers' group whose membership was drawn from a local potato farmers' association.

By contrast, the activities for the business operations include the following: First, sales of agricultural machinery. They have contracted several local middlemen and displayed some small machinery in the local businessmen's yards. They maintain contact with local farmer organisations to give them advice on using their solar irrigation and electricity systems. They would also like to participate in trade fairs to introduce users to their machinery. Thus far, their machinery business has not performed well. Second, sales of agricultural products of the farm, including maize, soybean, wheat and potato. The agricultural production from the farm is an important source of income for them. Most of their agricultural products are sold to local food companies and sometimes some local farmers also come to buy some potato for eating. Third, providing contract ploughing services to local commercial farmers, covering a total area of 1,333ha. In Zimbabwe local farmers seldom have large agricultural machinery, including tractors. So they invite the centre to plough and harvest their land in return for payment.

In the Chinese policy framework, the ATDC model of 'one institute with two roles' is seen as a solution to perceived problems of the predominant Western aid

model as well as China's past aid projects in Africa. The aim is to avoid the unsustainability of purely government-financed public aid projects that so many Chinese aid projects have encountered in Africa. At the same time, this model aims to avoid a focus on maximum profit capture seen in pure free-market private enterprises. In China's domestic transition, this model has gained success, and has also shown promise abroad through initial pilots by Chinese state-owned enterprises at Koba farm in Guinea and in Mozambique (Bräutigam and Tang 2013). In practice, this model requires Chinese staff to perform dual roles as aid workers and businesspeople. The model is leading to blurred identities and expectations among Chinese actors, and misunderstandings among local Zimbabwean partners.

In the ATDC aid model, the Chinese staff perform dual roles as aid workers and businesspeople due to the two identities attached to their single institute. In practice, the Chinese staff change their roles according to the situation they meet. As one ATDC staff member explained,

When we sell agricultural products and collect accounts receivable, we introduce ourselves as employees of the agriculture company; when we take part in activities such as exhibitions, or hold trainings, we introduce ourselves as from the Demonstration Centre. In such a way, we'll not feel embarrassed [about our sometimes contradictory roles].

The performance of dual roles as aid workers and businesspeople has blurred the workers' sense of identity, leading to conflicting working expectations among Chinese staff and misunderstandings among local Zimbabwean partners. In practice, Chinese staff and local partners try to overcome these challenges despite limited capacity and support, but the inherent design of the ATDC model remains a barrier to fully achieving the goal of a financially sustainable Centre contributing to increased food security.

Blurred roles of Chinese staff at the ATDC

China has not yet built up a professional development industry and systematic development education system. De Haan (2011) writes that development studies as a subject did not emerge in (mainland) China until recently, with currently ongoing efforts to build development studies within agricultural universities. There are no consistent systems for training development workers prior to deployment on ATDC and other aid postings. These aid workers are dispatched by companies and most of them have no experience in development aid. This was the case with the eight Chinese staff at the Zimbabwean Centre. Before they came to Zimbabwe, two of them worked as managers on a Chinese state farm; three others came directly from obtaining bachelors' degrees from an agricultural university; and the rest worked in various non-agricultural companies. Most of

them had received high levels of training in agriculture, especially in agricultural mechanisation. However, none of the staff received any training on development aid before being recruited and deployed to Zimbabwe. Furthermore, only four of the eight staff were skilled in English, with three having no English knowledge at all. 'We attended training in agricultural economics, agricultural machinery, plant protection, accountancy, international regulations and potato planting,' explained an ATDC staff member. 'Before we came here, one person who had spent for two months here introduced the Centre to us in one day.' Beyond this basic orientation, the staff had to figure the rest of the job out on their own after they arrived.

The complex working arrangements inherent to the ATDC model have caused mixed reactions to the Centre. Table 1 above illustrates the mixed professional backgrounds and blurred workload distribution of Chinese staff in the ATDC. In interviews, the Chinese staff reflected on the challenges of their dual roles. 'Our Centre is a very complicated institution,' explained one staff member. 'We have to fulfil the aid tasks of trainings, technology demonstration, and receptions for the Chinese government; we need to fulfil the business tasks to make profit to sustain the Centre; and we also have to serve the Zimbabwean government. We are pressed under three mountains.' Under these three mountains, the Chinese staff have to try to balance their inputs for the varying functions of the ATDC.

Due to the different positions of staff within the ATDC, as well as their different ages and motivations, they have diverse perceptions of their dual roles. The Director attaches more importance to the sustainability of the ATDC and emphasises his responsibility to seek business opportunities. 'The Chinese government only finances the initial three years, but we have promised to maintain this Centre for decades. So we have to try our best to capture more business opportunities,' he explained. 'It is not easy to find them. What we do is to try to see profits from the farmland while cutting operational costs as much as possible. We are cooperating with Gwebi Agricultural College in trainings, and investing in developing their farm so that we can share some profits. We also try to sell our agricultural machinery and offer paid services, such as we rent our tractors and heavy plough to prepare land for cultivation to local commercial farms.' During field work, the director always works towards this overall goal, as we can see from this snapshot of one week in his working diary, as observed in our fieldwork:

February 17: Delivered potatoes to a local potato chips manufacturing company in the morning, dealt with the Centre's computer network failures and accounts with the telecommunications company at noon, and picked up a research group from the airport in the afternoon.

February 18: Made nameplates for the farm's test sites in the office in the morning; guided farm

Table 1: Personal and professional profiles of Chinese staff at the Centre in Zimbabwe						
Name	Sex	Educational background	Working experience in China	English skill	Working position in the Centre	Working position in the agricultural company
G.M. Jiang	M	BSc in agricultural machinery	Retired manager of a state-owned farm	Non-English speaking	Director General of the Demonstration Centre	General Manager of the agricultural company, Manager of the Project Dept.
Mr. Yu	M	BSc in agricultural machinery	Retired vice manager of a state-owned farm	Skilled	Deputy Director General	Deputy General Manager
Mr. Liu	M	Senior school	Driver	Primary	Staff of the Training Dept.	Head of the Sales Dept.
Mr. Ju	M	Senior school	Kitchener in a company	Non-English speaking	Head of the Integrated Management Dept.	Head of the Integrated Management Dept.
Miss Hao	F	Secondary school; specialised in accountancy	Accountant	Non-English speaking	Financial Manager	Financial Manager
Xiao Wang	M	BSc in horticulture	Bachelor student	Skilled	Staff of the Production Dept. and Training Dept.	Staff of the Project Dept., Production Dept., Integrated Management Dept. and Financial Dept.
Xiao Yang	M	BSc in agricultural machinery	Bachelor student	Skilled	Staff of the Training Dept. and the Integrated Management Dept.	Staff of the Sales Dept. and the Integrated Management Dept.
Xiao Li	M	BSc in international trade	Bachelor student	Skilled	Staff of the Training Dept. and the Integrated Management Dept.	Staff of the Project Dept., the Integrated Management Dept. and the Sales Dept.

Source: Authors' fieldwork

workers to sort potatoes in the operating area; visited China Tobacco International Inc. to discuss cooperation in project declaration; then purchased the mower at a shopping centre and talked about relevant issues on prospects for investment in Zambia with a broker at the entrance of a large supermarket.

February 19: Sprayed lacquer on the nameplates made yesterday, cleared up the instrument room of the demonstration Centre, updated the company's financial records in the afternoon, dealt with the employment information of temporary workers and calculated wages and social insurance, and farming payrolls; produced the training video.

February 20: Arranged farm for workers to sort potatoes, put the labels of test species at respective plots in the field during the morning; updated the company's financial records around noon, purchased food and daily necessities for the Centre from the supermarket, summed up the potato test results and sent the information to the domestic market in the afternoon.

February 21: Arranged local workers to clean the park and sorted the presentation materials of the Centre on the morning; accompanied the

Minister, Director General and Permanent Secretary of Zimbabwe's Ministry of Agriculture on a joint inspection of the Centre with General Manager Jiang, served as an interpreter in the afternoon.

In his day-to-day work, the ATDC director drafts new project proposals, evaluates potential cooperative farms, negotiates with other agricultural companies, analyses local machinery needs, etc. We can see that he places little emphasis on the public functions of ATDC. Indeed, the manager explained that the business side of the ATDC is his focus because that is his experience and he lacks guidance on any other way to operate. 'The Centre is a quite new modality for Chinese aid and nobody knows how best to manage it. Our company has no experience and we also cannot learn from other Centres because we are all in same situation. We only know how to manage the farm and how to repair agricultural machinery. We were required to keep the Centre running and for that we can do what we can.' The salary arrangements of the ATDC also encourage the director to focus on business over aid because his salary is paid by the company which contracted to operate this Centre directly and not by the Centre. 'My bonus and subsistence,' he explained, 'depend directly on the profits of the ATDC.' The director and vice director both took the ATDC job after already retiring from successful careers. They see the ATDC as a good opportunity to do something extra and interesting. As

they see it, they can continue to earn their retirement earnings in China, while also making some money through the business ventures in the ATDC. The Centre can keep 30 percent of profits from its business activities as bonuses for Chinese working staff. Therefore, they are focusing more on the business side of the ATDC's dual identity.

The three young Chinese staff have rather different perceptions about their work at ATDC. They want to become professional aid workers. They explained that when they were hired, they were told that they would come to Zimbabwe to do a Chinese aid project. When they arrived, fresh out of university and with good English language skills, they were disappointed to find that there was a lot of criticism about the profit motives of the ATDC. Furthermore, their strong English skills allow them to interact with international aid workers, and they described a sense of jealousy that this kind of profession doesn't exist in China. 'I met some aid workers from US. They worked with farmers directly and they look very professional and know clearly what they are doing,' said one of the three. These younger staff members cannot change the situation, and feel frustrated that they have to follow the company's arrangement. 'Surely we are aware that the Centre is a grant-aid project, but we are hired by a company,' explained one staff member. 'The company should place more importance on the mission of the Centre and the aid tasks when it allocates tasks to us. I don't see the leaders considering the national mission and aid goals. Instead,' he continued, 'I am stuck dealing with the minutiae of our daily lives and the farm operations. If I don't go to buy vegetables from local market, we have no food for lunch. This is our reality. It has no relationship with the national strategy or the mission of the ATDC.'

Sometimes, these young workers complain and resist the leaders' arrangements for the for-profit aspects of the project. One of them explained his complicated emotions as dual roles:

I have no special emotion to the company which we registered here. I always introduced I came from the Chinese ATDC when I met others. When I sell potatoes or machinery I feel very uncomfortable. When I prepared for training course and hosted a delegation for the ATDC I felt very relaxed and happy.

Sometimes the resistance is quite subtle. For example, we observed passive resistance during the internal workshop to develop the annual work plans. When the directors explained the potential projects and working tasks to all participants, the young Chinese staff remained silent and did not take notes or express their opinions. These frustrations made them especially open and interested in talking with us as researchers – discussing together what the future of the ATDC could be, and exploring whether there is a better model for operations. The dual roles of the ATDC design thus create tensions among the staff themselves, as they take on different

roles according to their background, skills and interests. On the surface, they are a cooperative team with a common goal, but in practice, they may resist aspects of the dual role demanded of them.

In addition to the different motivations and expectations among Chinese staff, the dual identity of the ATDC creates confusion and conflicting expectations among others, and has led to negative perception and feedback from both the Chinese government and local partners. The manager of the ATDC explained,

In recent years, we received so many criticisms from the Counselor's office and the Ministry. Some officials say the Centre is a white elephant. We are hurt by these comments. We have done a lot of training, but we do not know how to publicise our work because we are not professional trainers.

Lacking professional knowledge and skills on aid programmes, they do not endeavour to communicate with both local partners and the Chinese Counselor's office. For example, they have failed to submit required working reports to the Counselor's office's requirements and do not discuss budget or working-plans with local partners. One Chinese staff member explained how his previous work experience in China left him ill prepared for the tasks expected at the Centre. 'I was a farm head in China and I knew how to manage a farm. Here I have to work as training unit head and I have no knowledge or experience, especially in Zimbabwe. And nobody can supervise me.' Without training in development aid, the staff have had to learn by doing. 'We have accumulated some experience,' explained the ATDC manager, 'and we now have some basic knowledge about training. Hence we have hired a local farm manager to let our staff concentrate on training and piloting.' This ad-hoc, learning-by-doing approach to the aid duties of the ATDC has been a key reason for the misunderstandings from different Chinese actors and local partners.

Blurred expectations of different Chinese actors

The official rhetoric surrounding the ATDC focuses primarily on its aid identity and this rhetoric is carried down to the country level, with Chinese officials in Zimbabwe. At the opening ceremony of the ATDC, for example, the Chinese embassy representatives emphasised how the ATDC was a symbol of China and Zimbabwe's friendship under the FOCAC framework, and described how it would serve as an important platform for agro-technology sharing. In practice, the requirement for ATDCs to be sustainable entitles them to bear the function of promoting enterprises to go global. At the Seminar on the Sustainable Development of Demonstration Centres, held in Beijing in 2013, one government official explained that,

It is risky to invest in overseas agriculture because the investment is high and the payback period is long. Therefore, the Ministry of Commerce and the Ministry of Agriculture designed [the dual aid-business] mechanism [for the ATDCs]. In the project construction period and technical cooperation stage, the government provides a set amount of funds for project implementers to look for powerful experienced enterprises to jointly promote Chinese agricultural enterprises to go global. The Demonstration Centre is the bridgehead and window for Chinese agricultural enterprises to go global, and thus provides an opportunity for the enterprises that are willing to go global.

However, he also emphasised that the Demonstration Centres must base these business ventures on solid technology.

Many domestic agricultural technologies [in China] have a history of a few decades or even more than one thousand years. These technologies are needed abroad. We need to push forward the promotion of these technologies and boost the development of Demonstration Centres on this basis. It is doubtful that the Demonstration Centres could develop well and achieve commercialised operation without solid technology. Some Demonstration Centres and construction units engage in agricultural trading, agricultural technology sales and even real estate development, but these can only be sideline business of Demonstration Centres.

Thus, under China's policy framework, although the Demonstration Centre has the function to promote enterprises to go global, its core function is to demonstrate and promote China's agricultural technologies. During his visit to China's ATDC in Zimbabwe, former Minister of Commerce Chen Deming pointed out that: 'The central must appropriately develop breeding industry and introduce China's biogas technology or farmers' small-scale biogas digesters technology to Zimbabwe because this country has good weather conditions.' He continued, 'We are also considering introducing China's agricultural machinery maintenance technology here to support the maintenance of agricultural machinery in Zimbabwe.' Another senior official on this visit similarly emphasised that although the sustainability of the Centre's commercial operations was very important, the Chinese government never intended to build up the ATDC as commercial farmland using grant aid resources.

Despite the official rhetoric placing equal emphasis on both the commercial and public service roles of the ATDC in theory, in practice in Zimbabwe, the Economic and Commercial Counselor's Office criticises the Centre for shifting its priorities to business: 'They pay too much attention to business now, and invest few resources in aid work. We have reminded them several times, but they

tend to forget to organise training courses without our reminders.'

While the Chinese government criticises the ATDC for being too business oriented, Chinese businesses in Zimbabwe criticise it for being too limited in its business scope. At the time of our research, eight Chinese agricultural companies had investments in Zimbabwe's agriculture sector. They had imported agricultural machinery from China, but faced challenges when these machines needed repair, as there were no services available and spare parts had to be brought from China at high cost. When the ATDC was getting established, they saw that it was to be run by an agricultural machinery company, and thus expected that it would be able to provide spare parts and machine maintenance service. As the manager of one company explained,

I heard from the embassy that the agricultural machinery company would construct and operate the ATDC. I was very happy because we really need spare parts and maintenance service on our machines. I went to the ATDC to say hello to the director. I hoped they could offer this service to us.

According to the bilateral agreements between China and Zimbabwe, however, the Centre is not permitted to repair agricultural machinery. The Centre did import some agricultural machines for its own purposes in developing and running the demonstration farm; however, it does not have the means or authority within the agreement to import machine parts, sell them, or conduct maintenance services on external machines. When Chinese agriculture companies needed spare parts and came to ATDC to find them, the Centre was not able to meet their demands. 'When I saw that so many tractors and other machines were exhibited at the Centre,' recalled another agribusiness manager, 'I thought it should offer agriculture machine sale and maintenance services. But I found I was wrong; they cannot do this.'

Though the Centre is seeking a local market for its agricultural machinery, at present the local farmers only express interest in the small and cheap machinery. The modern and large machinery displayed in the Centre is mainly for demonstration purposes and for its own agricultural production; the image it conveys leads to misunderstanding by non-Chinese as well. For example, international aid workers visited the farm during our research. They saw the large machinery and also thought that it was for promoting the sale of Chinese agricultural machines. They interpreted the ATDC as a 'big commercial farm' and assumed that its main purpose was to promote big Chinese agricultural investments. In their discussions with ATDC staff, they emphasised that these machines were suitable for commercial production and not for small scale farmers, and they expressed concern over the implications of these Chinese machines becoming available in Zimbabwe.

Blurred expectations from Zimbabwean partners

The Zimbabwean partners also have different expectations for the ATDC.

Top officials view the ATDC as promoting close links with the Chinese government. As mentioned earlier, China is not establishing ATDCs in every African country. The ATDC has symbolic relevance, showing close China-Africa relations in those countries that are recipients. High officials involved in ATDCs gain political capital through engaging with China and developing close relationships with the Chinese government. They regard the Chinese ATDCs as an aid program, benefiting their agricultural sector and promoting food security following China's success domestically. For example, the Minister of Agriculture has visited China five times and is impressed by China's agricultural development performance. He expects great benefits from the ATDC's goal of sharing Chinese agricultural technology with Zimbabweans. As he explained in an interview,

The ATDC is very important and very unique and special. The Centre can exhibit agricultural machines, and farmers can visit and access to these machines, and they can learn to use them. I hope the Centre can be cultivated as a Centre of trainers. The agricultural technicians, teachers and students in colleges and officials can come here to be trained and then they can continue to train farmers in different areas. For example, the Centre is piloting new cultivating methods of potato, and potato harvesting machines. I think this is quite good. Potato is transferred from food crop to cash crop in Zimbabwe because potato chips are now very popular. The traditional potato variety and technology cannot match current processing needs. I heard that there was one farmer who came from 300km away to see the potato planting and machines here. I am very glad to know this.

In addition to direct political prestige, high officials also expect to gain additional support from China via the ATDC platform. When the Chinese Minister of Commerce came to visit the ATDC, the Zimbabwean Minister of Agriculture came one day prior to check preparations, and the next day he showed up two hours early to ensure he would arrive before the Chinese Minister. Furthermore, the Minister required all division heads in the Zimbabwean Ministry of Agriculture to come to the ATDC to welcome the Chinese Minister. They took great efforts to present their hospitality and their support to ATDC and to promote China's continued engagements in Zimbabwe. 'We hope China can offer more support to our country,' explained the Minister in an interview. 'China could build up a special economic zone here, like in Ethiopia. Chinese agricultural companies can invest in this economic zone. We also hope China can help us to develop our dairy, meat cattle, poultry,

pig and fresh-water fish.' He continued, 'We hope China can help us to extend value chain of agricultural products, such as food processing, seedling, leather and other subsidiary agricultural products processing. We also hope China can help us to improve rural infrastructure and telecom development.'

The Zimbabwean Ministry of Agriculture has appointed four officials to jointly deal with ATDC affairs. They work with Chinese staff directly and have their own expectations for the ATDC. They not only hope to gain more support from China, but also to promote the ATDC as an international training centre available for use by other donors. They work to present their capacity to manage China's aid programmes well, proving their capacity to cooperate similarly with other donors. During our research, they were busy preparing for a visit by a Western aid delegation. They discussed the visiting schedule and route carefully with the Chinese staff, and introduced the different buildings, instruments, functions and activities of the ATDC to the delegation. When they found that the Chinese staff were unable to present clearly in English, they stepped in and explained the workings of the ATDC, and responded to questions and confusion from the delegation. 'The Centre owns a classroom, laboratory, pilot farm and agricultural machines,' explained the deputy division head to the delegation. 'Farmers can come here for training. Not only China can organise training programmes here but other donors can come to use it as well. The Centre can offer training materials, and international donors can pay for the farmers' expenditures including transportation and accommodation.' After the delegation left, he told researchers, 'You can see that the Centre is very attractive to international donors. They may be considering leaving and not continuing their aid programmes in our country. But then they come to visit the Centre and they are considering staying in Zimbabwe.'

Due to the positive expectations towards the ATDC, the local partners cooperate well with Chinese staff and also try their best to solve difficulties they have encountered. The Chinese staff reflected,

They have really helped us a lot. They help in contacting people; making arrangements for us to participate in local agricultural exhibitions where we have presented our agricultural machinery; contacting local seed companies and making arrangements for us to try out the varieties available locally. The Ministry of Agriculture also invited us to visit a local farm on our opening day so that we could learn how to conduct farm demonstrations; they also invited Gwebi Agricultural College to hold trainings jointly with us. Whenever we hold a training session, their officials are present and deliver opening and closing remarks.

Thus the personal and political benefits of interacting with the Chinese through the ATDC has created a positive sense of collaboration on both sides.

Despite positive collaboration among the higher level officials, the dual roles of Chinese staff and inherent requirements of the ATDC model do lead to misunderstandings by local Zimbabwean partners. These stem from their personal motivations for involvement in ATDC administration as well as their personal perceptions of the model.

The ATDC's Zimbabwean government partners see themselves as co-managers, but also as aid recipients, and they expect payment from the Chinese. In China, government officials involved in international aid programs offered by donors within China are paid by the Chinese government and are not allowed to get additional payment from that aid work. The Chinese thus expect that the Zimbabwean partners should be paid by the Zimbabwean government. Local partners do not understand this expectation from the Chinese side. They perceive that the Chinese government has provided Zimbabwe with a three-year technical cooperation assistance programme. They expect that Zimbabwe, as the host government, should have full discretion in how the funds are used. 'In the past six months, we did not work as one team,' explained a local partner who is from the Zimbabwean Ministry of Agriculture.

The Chinese government sent money, but we do not know how much was sent. We need to know. I drive my car to the Centre for a joint job. Nobody pays for the fuel. All vehicles provided for the Centre are used by Chinese team only; we never use them. It is not fair driving my own car for work at the Centre with no reimbursement for fuel expenses. We are not special managers for the Centre; we simply spend some of our working time working for the Centre. The ministry does not pay us for work done at the Centre so the Centre should pay us instead.

Obviously, the local partners think that they are co-managers and they are entitled to some funding from the Chinese government. Chinese staff take the position that they came to Zimbabwe to help and will not pay a partner for its contribution. With this logic, the Chinese director explained that the Zimbabwean government only provided scheduled consultations on an 'as-needed' basis. 'When we contact the government,' he explained 'they offer assistance. We share our plan with them and they may make suggestions. They need to pay [their own staff] for this involvement.' These misunderstandings have induced conflicts between local partners and Chinese staff. The local partners have thus reduced the frequency of their visits to the Centre.

The other blurred expectation of local partners stems from their perceptions of the ATDC's core function. As mentioned earlier, they attach more importance to the ATDC's public function. They don't understand the intention of the sustainability goal in the ATDC model, so they do not understand why Chinese staff focus so much on how to enlarge the farmland and seek more business opportunities. This leads to suspicions about their 'real motivations' in Zimbabwe. As one official from

the Zimbabwean Ministry of Agriculture explained, 'They should know clearly why they came to our country. They should have training plans. They cannot only focus on commercial production. If they came here for planting potato, maize and soybean, and only want to manage a thousand-hectare farm, they were totally wrong.' As explained earlier, the real motivation for the staff needing to expand the farm is the responsibility to develop economically sustainable operations to support the functioning of the Centre. As one Chinese staff member explained, 'Presently we are encountering no financial problems, but the situation could change when funding from the Chinese government stops. We have to try to make profits to maintain the Centre through exploring business opportunities. As mentioned at the start, the Centre needs about US\$2m per year to cover salaries, infrastructure servicing, training, vehicles and general maintenance; however, it currently only makes US\$180,000. One option that was proposed by the Chinese staff was that they could try to ensure their economic sustainability by enlarging their plot of land to produce more food for sale on the local market. At present they are working with 74ha of land, but they estimate that if it can be enlarged to at least 600ha then they will be able to maintain the Centre from those profits. However, they have faced difficulties convincing their Zimbabwean counterparts to grant them the extra 526ha.

The Chinese staff have made efforts to improve the relationship and have adopted some informal means to do so. 'Treating them to dinner' and 'gifts' – two means to maintain a relationship – have played a positive role. When the former Director of the Centre shared his work experience, he stressed the need to periodically invite the local counterpart staff to dinner to establish a friendship. 'We often invite the officials of the Ministry of Agriculture to drink tea or have dinner together,' explained the Chinese director, 'and we visit them on New Year's Day and other holidays or give them some gifts. It is very useful.' Chocolates, corn meal and fertiliser are also well-received gifts. Chinese and Zimbabwean festivals are similarly good occasions for gift exchange, and Chinese restaurants have become the most important places for treating local partners to dinners.

In addition, the Centre also strives to maintain good relations with the officials through joint development of farms and contract farming. The Centre was once in a poor relationship with Gwebi Agricultural College, so it ploughed 100ha of land jointly with the college. 'We made little money from the 100ha of land. We did that to maintain a good relationship with Gwebi Agricultural College. After all, the Centre is on their property,' explained the Chinese director. 'We do not charge government officials for ploughing and harvesting work done on their fields. We develop farms jointly with officials. The purpose is to build a good relationship with them rather than to make money.' With these efforts, the local officials sometimes reciprocate and use their own initiative to secure fuel to come for joint activities at the Centre; and rarely request reimbursements from the Centre. 'They are really kind,' explained one Chinese staff member.

'When we encounter troubles with visas, labour and other issues they always try their best to help us promptly. Last time when the Chinese government team came to evaluate our work, the Ministry of Agriculture gave us a lot of good comments.'

Furthermore, the Centre has recruited 21 workers locally; among them eight tractor drivers, six security guards, four general farm hands and three gardeners. To relieve the Chinese staff of the pressures of managing fieldwork, in 2014 the Centre recruited a farm manager from the host country. During the peak farming season, the Centre generally hires an additional 100 workers for planting, weeding and harvesting. These interactions also reveal the complications spurred by the dual identity of the ATDC. In Zimbabwe, different salary scales are set for different sectors and salary scales in the government are among the highest, while those in the agricultural sector are the lowest. Local workers perceive the Centre as a government program, so assume they should receive higher 'official' salaries. According to our research, most local workers feel their salaries are too low because they understand they are working for a Chinese aid agency whose salary scale should at least equal that of civil servants in Zimbabwe. At the time of commencing operations, the Chinese staff were unaware of the position regarding salary scales for different categories of workers, and they fixed the lowest salary at US\$170/month based on the category for general farm hands. This was the then minimum wage in government. 'During the first three years of infrastructure construction,' explained a Chinese staff person, 'the Centre was a grant-aid project and we did pay local workers salary according to public sector wages. But now the situation has changed and it is the company running the Centre, and all local workers have been hired by the company, not the Centre. So we have to change the nature of employees' contract and fix their salary at the level of agricultural workers. Thus the 'one institute with two roles' model of ATDC leads to confusion among local farm workers, and creates dissatisfaction. According to our Chinese informants, because they are not satisfied with their income they do not work hard. They have reportedly even occasionally tried to compensate for their low wages by stealing potatoes, soybean and other farm goods.

Conclusion

Through the Agricultural Technology Demonstration Centre model, the Chinese aim to promote the recipient country to increase grain yield, improve access to agricultural technology and enhance food security. The Chinese assistance through ATDCs aims to establish a platform for enterprises to develop in Africa, accelerating agriculture's process of going global and promoting sustainability of development aid projects. Chinese ATDCs are thus designed to be aid programs operated by companies.

In Zimbabwe, this design requires Chinese staff to perform dual roles as aid workers and business people. They are required to seek out potential business opportunities, enlarge the scale of farmland and expand the domain of their activities. At the same time they have to organise demonstrations, exhibitions and trainings. Imbalances of their inputs on aid and business lead to blurred identities as aid workers and businesspeople. These identities lean more one way or the other depending on the workers' own age, position and educational background. These mixed roles create blurred expectations among Chinese actors, and misunderstandings among local Zimbabwean partners. Different actors engage with the ATDC's operations and bring different pressures to the model and to the Chinese staff running it. The Chinese staff struggle to meet the expectations from these actors. In practice, Chinese staff and local partners try to overcome these challenges despite limited capacity and support, but the inherent design of the ATDC model remains a barrier to fully achieving the goal of a financially sustainable Centre contributing to increased food security.

The blurred lines between aid and business have been embedded in China's aid projects. This model contrasts with Western aid models. The difference comes from China's domestic development experience and continuous review of development aid. This article does not provide evidence to prove that Chinese aid provided through ATDCs is a more effective delivery mode than that used by traditional Western donors. However, China's contributions to international aid and development through the ATDCs provide new insights into a field where the perfect aid arrangement remains elusive. China's aid approach is unique and will inevitably undergo modifications through the numerous reviews it continues to be subjected to. Chinese engagement worldwide has been anchored in its espoused principles of non-interference in the internal affairs of sovereign countries as well as non-conditionality of aid. The case of the country's aid to Zimbabwe through the ATDC has presented new paradigms of micro-project operation, interaction and cooperation with locals.

End Notes

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