A Chinese Pesticide Enterprise in Ghana: Motivations, Impacts, Challenges and Local Interactions

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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

This working paper explores the motivations, impacts, challenges and interactions of a successful Chinese pesticide enterprise in Ghana. In the context of much China-Africa literature focusing on state-backed Chinese business initiatives in Africa, this paper takes an ethnographic approach to explain the rise of a private sector Chinese agrochemicals company in Ghana. This is significant because of the frugal amount of literature that does cover Chinese migrant businesses in Africa, very few studies look at agricultural firms in particular. The main conclusion of this research is that the push-factors from China's domestic market and opportunities from Ghana's agrochemicals market are important driving forces for Chinese pesticide enterprises to 'go out'. Furthermore, diversified strategies are necessary to deal with local market environments based on business and social networks that intertwine formal and informal relations.

Key words: China, Ghana, pesticide enterprise

Introduction

After three decades of sustained growth, Chinese industry is becoming choked by bottlenecks: overcapacity, falling profits, surplus capital, shrinking demand in traditional export markets and scarcity of raw materials (Lee 2014). Under these circumstances, more and more Chinese firms and citizens are looking for new opportunities on the African continent.

This growing migration of individuals, families, private companies and state-owned enterprises to Africa is still little understood. Some have suggested that their migration is being actively promoted by Beijing to secure resources and expand markets (Gaye 2006). Others have focused much more on the informal nature of many people's migrations and the huge risks they take (Cook and Alemu 2015; French 2014; Mohan and Chang 2014).

Ultimately there are many different paths that Chinese migrants have taken upon arriving in Africa. Gu's work on Chinese private enterprises in Africa shows that it has largely been since 2005 that the smaller and medium sized private enterprises have poured into Africa. These firms are already engaging in industries as diverse as 'agriculture, forestry, food processing, fishing, furniture manufacturing, footwear, textiles and garment making, pharmaceuticals and services. These are not simply operating within the conventional sectors of oil and extractive industries associated with Chinese SOEs activity' (Gu 2009: 7-8).

Beyond this study though, there remains very little empirical research at the firm level of some of these small to medium sized companies that are setting up across Africa. Despite some notable exceptions (Chatelard and Chu 2014; Yan and Sautman 2010), this is particularly so in the agricultural sector, which is often assumed to concern large-scale investments in land or state-to-state agricultural cooperation programmes. This may seem somewhat surprising for those who know China as the global leader in agro-chemical production, a strong centre of research and development into hybrid seeds and a producer of various forms of affordable agricultural machinery, among other interests. Just as the Monsantos and Massey Fergusons of this world are eyeing up African markets as the next big opportunity, so too are the more humble Chinese agricultural SMEs.

This paper will tell the story of a Chinese pesticide company that started off as a small trader in Ghana, only to become a market leader in the country and a strong competitor in the West African region in a remarkably short space of time. It will take a detailed look at some of the drivers, opportunities, challenges and solutions that this Chinese firm has encountered along the way. By doing so this paper aims to provide a valuable first step in understanding how Chinese agricultural SMEs are operating in Africa.

To do this the following section will begin by introducing the literature and our methodologies in researching this topic. Section 3 describes the broader context of China and Ghana's pesticide markets so as to understand the drivers and opportunities in 'going out'. Section 4 then dives into the operation of our case study company in Ghana and its challenges. This is followed by a look at how the company met these challenges through a focus on social interactions and local networks in Section 5. The final section will present some conclusions and wider implications of these findings.

Literature review and research methodology

The overwhelming majority of studies on Chinese private sector engagement in Africa tend to look at the role of the Chinese state. Some focus on how Chinese cooperation agreements are often made contingent on the involvement of Chinese firms, e.g. in large construction projects (Tiffen 2014). Others draw attention to China's biggest SOEs making deals on natural resource extraction across the continent (Shen 2013). There are also those that look at the role of Chinese policy banks and their affiliated bodies (e.g. China EXIM Bank, China Development Bank, China-Africa Development Fund) in supporting China's 'go out' policy (Xu 2014). These have all been key support systems in the growth of Chinese business in Africa, yet they too easily obfuscate the growing presence of independent migrants and their small and medium sized enterprises in Africa which have succeeded (and failed) largely without any state support.

Examples of studies that have looked at this small but growing sector include Gu's (2009) work on 'China's Private Enterprises in Africa', Wang's (2007) analysis of 'What Drives China's Growing Role in Africa' and Shen's

(2013) paper on 'Private Chinese Investment in Africa: Myths and Realities'. Together they make a strong case that 'the private sector, rather than government ministries, is increasingly the engine of economic exchange between China and Africa' (Wang 2007).

Gu's work in particular offers the insight that there are three main stages to African SME engagements in Africa. The first involves trading, the second involves investing (sometimes in manufacturing capabilities) and the third involves the formation of industrial clusters. True to this observation, the case study that this paper observed in Ghana fit within the first two stages of this process.

With regard to agriculture in particular, there have also been a growing number of studies looking at Chinese migrants involved in farming (Cook and Alemu 2015; Lu et al. 2015; Chatelard and Chu 2014), as well as Chinese companies' involvement in the construction of Agricultural Technology Demonstration Centres (Tang 2013). Of those migrants coming out on a whim to find commercial opportunities, these papers often tell the story of Chinese migrants eking out a difficult living. They are often operating under the radar of both local and Chinese authorities, are forced to adapt to local circumstances, and only some survive in the face of numerous challenges.

Yet despite this growing body of literature, there remains relatively little work on the nature of China's agricultural SMEs in Africa. This paper seeks to address this gap in the literature by presenting the story of one Chinese SME that set up in Ghana in the early 2000s, and has since grown to be a market leader in its field.

The research methodology for this paper is largely qualitative. Field work took place in Accra, Tema and Kumasi in Ghana from November to December 2013. It mainly involved key informant interviews with Chinese managers and local staff, dealers and farmers as well as some competitors of the case company. Moreover the Environmental Protection Act (EPA) of Ghana was also visited so as to better understand related laws and policies for the registration and sale of pesticides in Ghana. Participant observations were also used in looking at buying and selling behaviours as well as the interactions of Chinese managers with local dealers when we visited Kumasi pesticide market. Firstly, though, the next section will begin by explaining the context within which this agrochemical company operates.

Drivers and opportunities

China's pesticide industry is characterised by rapid development and excess capacity. Currently, China is the largest producer and the fourth largest exporter of pesticide in the world (Qiao and Yi 2008). In recent years pesticide production in China has grown at an annual rate of 13.7 percent, from 0.648m tons in 2000 to 2.342m tons in 2010 (Wang 2012).

However, the production of pesticide is growing more rapidly than the demand. For example, pesticide production in China grew from 1.039m tons in 2005 to 2.2622m tons by 2009, an annual average rate of 21.5 percent, while demand in the same period only grew from 1.46m tons to 1.709m tons, an annual average rate of 4 percent. As a result it was around 2008 that China's agrochemical producers began to outstrip demand in China and therefore sought out new markets abroad more actively (Wang 2011). As will be noticed in the next section, it was also at precisely this time that our case study company really took off in Ghana (2009).

Between 2000 and 2011, China's export value of pesticides rose from US$0.46bn up to US$2.42bn while its export volume of pesticides grew at an annual rate of 17.3 percent. Yet for a long time China's pesticides were relatively cheap as compared to more established international brands. For instance, China's average export price between 2004 and 2009 was around US$3/kg, while the international pesticide export price remained at US$4.5-7.5/kg from 2000 to 2009. That said, China's production costs are rising for several reasons, threatening China's global competitiveness.

Firstly, labour costs have increased significantly in recent years. Many of the biggest agrochemical producers in China are based on the East Coast (Lin 2014), and a cursory glance at average wages in three such key provinces tells this story very succinctly. Table 1 below shows that average wages in urban-based manufacturing doubled in less than ten years, which has, needless to

Table 1: Average wages (in RMB) in urban-based manufacturing by region*

	2003	2004	2006	2007	2008	2009	2010	2011
Guangdong	15,763	17,007	18,019	20,349	22,547	25,249	27,578	31,277
Jiangsu	13,512	15,146	16,937	19,647	22,510	25,688	27,765	32,209
Zhejiang	14,267	14,722	16,446	18,507	20,970	23,816	25,429	29,671

* There were no statistics available in this field for the year 2005

Source: National Bureau of Statistics of China say, put the greatest strain on those labour-intensive firms with the smallest margins.

Furthermore, the Chinese government has also launched a series of policies to limit the development of energy-consuming industries and enforce stronger regulation on their environmental impacts. The agrochemical sector is typically a high polluting industry and so the need to invest in environmental protection has cost them dearly. Although the enterprises have been increasing investments in environmental protection, there is still a big gap between China and developed countries. As a result, it would be necessary to increase investments far more in order to achieve international emission standards.

Despite this some still argue that declines in food stocks and increases in food prices will create a continued growth of international demand for pesticides (Han 2007). Facing severe food insecurity, almost all countries all over the world, particularly developing countries, have to seek ways to increase grain production. Therefore the demand for pesticides triggered by agricultural development will continue to increase in both developed and developing countries. Although Chinese firms' profit margins will continue to shrink for the foreseeable future, regions in Asia and Africa still depend heavily on imported pesticides as their local industries are lagging behind. Consequently, companies such as our case study still have the possibility of expanding their business interests for some time yet.

The Ghanaian pesticide market

Located on the west coast of Africa, Ghana is a country heavily dependent on agriculture and mining. Ghana enjoys an excellent geographic location with a good transportation and infrastructure system consisting of roads, water, electricity, telecommunications, ports, airports and financial institutions. It has opened sea lines and airlines to Europe and the United States, which facilitate a smooth access to West African markets.

Ghana's agricultural production grew by 5 percent every year between 1985 and 2010 (Leturque and Wiggins 2011). By 2014, agriculture's relative contribution to national GDP had shrunk to 20.7 percent (down from 40.9 percent in 2005) (World Bank undated) but this is partly because the country recently changed its base year for GDP calculations to 2006, and partly because of economic growth in other sectors (Jerven 2013). Significantly though, according to the most recent statistics, in 2010 agriculture still accounted for 42 percent of total employment (World Bank undated), a large proportion of which is made up of smallholder farmers (Leturque and Wiggins 2011).

The growing use of agrochemicals has been an important part of Ghana's agricultural successes. The country is almost entirely dependent on imports of fertilisers and pesticides, as there remains very little local production (Fianko et al. 2011). In fact it is estimated that as much as 87 percent of Ghanaian farmers use pesticides (Ibid: 223). Recognising the contribution these products make to the agricultural economy, the government has therefore allowed tax exemptions for foreign enterprises engaged in pesticide production and trade for at least five to ten years. Mechanical equipment imported by foreign enterprises for personal use is also exempted from import duties, sales and license tax.

This huge dependence on agrochemicals in Ghana has not been without its controversies as well. Increasing numbers of actors have pointed to the potentially hazardous effects of these agrochemicals, not just on the farmers who apply them, but also on consumers who may have residues of these chemicals in their food (Business News 2015; Christian Aid 2012). On the other hand, commentators recognise the huge gains in agricultural productivity for smallholders, as well as agrochemicals' role in eliminating pests such at black flies in the Volta region, which transmit a debilitating condition known as Onchocerciasis or African river blindness (Fianko et al. 2011).

Nevertheless, Ghana's market for foreign investors is still huge. Favourable import terms are, however, only extended to foreign companies with the understanding that only locals are allowed to serve as pesticide dealers in local shops and markets. This means that although Chinese companies are allowed to establish themselves as wholesalers within the country, they are then dependent on local dealers to sell their products to end users. As such, there are currently estimated to be around 6,000 pesticide dealers in the pesticide market (International Business Daily 2011).

For these reasons, Ghana has a particularly strict regulatory system for imported pesticides. This falls under the Pesticides Control and Management Act of 1996 (Act 528), which is the sole provision governing the production, classification, labelling, import, export and use of pesticides in Ghana. The law applies to a very broad range of actors, including the government, companies, manufacturers, users, dealers, importers, exporters, advertisers and preparations manufacturers. The EPA and its affiliated Chemicals Control and Management Centre (CCMC) are responsible for pesticide registration and the licensing, inspection and control of agrochemicals.

In summary, just as Chinese agrochemical producers have sought out new markets for their surplus, Ghana has simultaneously sought to attract affordable (but safe) agrochemical producers. This combination has led to a lot of Chinese producers exporting to Ghana and a small handful setting up sales offices there too. For one company in particular, this has been an overwhelming success.

Operations, impacts and challenges of Chinese pesticide companies in Ghana

How a new Chinese pesticide company entered the Ghanaian market

Zhang Lin Company[1] is a joint venture between XA Company and YG Company. The former is a private firm and China's largest pesticide exporter. It is also among the world's top 20 producers, and its overseas sales account for approximately 40 percent of its total sales. By comparison, YG Company is a much smaller registered limited liability company owned by a Chinese man called LCD in Ghana and was originally engaged in the import and export of agricultural tools and supplies. In 2005, LCD looked for a partner to bring in investments whilst XA Company was simultaneously actively exploring overseas markets. By the end of 2009, XA Company and YG Agricultural Co., Ltd. in Ghana entered a share transfer agreement whereby XA Company acquired 70 percent of YG Company's shares from LCD, at a cost of 35m RMB (Liu 2010). The joint venture was then formally established in Accra in 2010.

Zhang Lin's main products include herbicide, pesticide and fungicide, of which herbicide is their best-selling product. Having only traded agrochemicals for a few years, one employee estimated that their herbicide now accounts for about 75-80 percent of the Ghanaian market share, while their insecticide and fungicide account for about 50 percent of the market share. A more sober estimation was offered by the company's Chief Financial Officer who estimated that as a group, these products made up roughly 35-40 percent of Ghana's market share. In addition, the company also deals in small farm tools such as sprayers.

Soon after their joint venture came into practice, the company decided to establish a bottling plant just outside of Ghana's second biggest city, Kumasi. Work was completed in May 2012 and it now employs roughly 80 local staff on its assembly lines. This alone made Zhang Lin the only pesticide company in Ghana with bottling capabilities. The chemicals are still imported from China in tankers; some from XA's own factories and some from other producers, but this bottling capacity significantly reduces transport costs and increases their trade capacity. From this now solid trading post in Ghana, the company is also exporting to other countries in the area; namely Côte d'Ivoire, Mali and Nigeria, with a view to expand further in the near future.

At the time of the interview in December 2013, Zhang Lin stated that its annual pesticide production had reached about 10,000 metric tons and grown at an annual rate of 50-100 percent. In 2012, the annual profit of the company nearly reached 30-40m RMB. The management office of the company currently employs 16 Ghanaian staff who are responsible for office management and pesticide marketing and sales.

Competition and business strategies

One of Zhang Lin's defining features is that it combines XA's capital and expertise in the pesticide sector with YG Company's 20 years of experience in trading farm tools and supplies in Ghana. The latter has also built up a solid understanding of government policies and market conditions, as well as an invaluable social network.

Nevertheless, the pesticide market in Ghana is fiercely competitive. In fact, of the agrochemical companies that export to Ghana, Chinese distributors are particularly significant. When we asked the CFO of Zhang Lin Company how many Chinese companies were selling in Ghana he replied, 'Too many! Agrochemicals [in Ghana] generally come from China. There aren't many companies here whose roots are necessarily Chinese but they're now increasing…. A lot of the local producers of pesticides are going bankrupt and competition is increasing as a result.' He estimated that as much as 80-90 percent of agrochemicals in the Ghanaian market come from China. As we found out from traders in Kumasi market, this is often due to Ghanaian distributors going to China to source cheap agrochemicals directly, or simply buying the goods from China online.

In view of this, once Zhang Lin had passed the necessary standards set by Ghana's EPA it then took a two sided approach. First it aimed to strengthen the product's brand identity; second, it actively sought feedback on product quality from dealers and consumers to make improvements.

The strengthening of their product's brand identity by improving packaging is one of the most important marketing strategies adopted by Zhang Lin. In Ghana, local farmers were highly sensitive to the shapes and colours of pesticide bottles. This was usually a product of illiteracy among many farmers, and therefore they would choose each product according to its colour. For example, Zhang Lin's three main products, namely herbicides, insecticides and fungicides, are packed in green, red and yellow bottles respectively. On our fieldwork in Accra, we encountered one other Chinese pesticide trading firm (albeit a lot smaller) that also adapted their sales to this custom. She had specifically instructed the manufacturers she sourced her goods from in China to pack the product in the same bottles as those recognised or used by Ghanaian farmers.

Zhang Lin's marketing activities primarily revolve around traditional methods, namely word of mouth promotion through their dealers, rather than TV, online or other media advertising methods. These tend to comprise of the following key approaches: Firstly, the dealers promote their products in rural areas, whereas the company's employees will only deal with promotions to farmers that come to their offices. Secondly, Zhang Lin increases brand awareness for its products by organising incentives and other activities. For example, they have a lottery whereby 'Win 50 Cedis' is printed on the inside of some of the pesticide bottle caps, or they invite farmers to participate in football matches. Thirdly, the company regularly sends their clerks to demonstrate how to use their products and offer appropriate training combined with after-sales service in the countryside. They also use this as an opportunity to record feedback from the farmers in rural areas on a monthly basis. Fourthly, they will attend agricultural fairs across the country on 'Farmers' Day' to distribute free samples of their pesticides and promote their products. Finally, they work with Ghana's Ministry of Food and Agriculture to incorporate their product publicity through the ministry's agricultural technology extension departments.

As mentioned earlier, Zhang Lin deals primarily in wholesale rather than retail sales. According to the prices we found at Kumasi market, a large bottle of herbicide (1 litre) which would cost 10 RMB in China was sold at 10 Cedis per bottle in Ghana, and the exchange rate differential was the company's profits. Usually, a Ghanaian Cedi is equivalent to about 2-3 RMB. The dealer will raise and drop the price according to changes in the dollar exchange rate against the Ghanaian Cedi. If the dealer exports the pesticide to other African countries, such as Côte d'Ivoire, its price will then be higher than the wholesale price in Ghana; this might be as much as double the price.

Local farmers usually buy their pesticides in the shops in town, and sometimes receive door to door retailing. One local farmer (Uncle George) with 30 years of farming experience said in an interview that he had used YG Company's product for 15 years and found it to be of good quality. Sales clerks occasionally went to the village to give demonstrations about how to use pesticide products and offered marketing materials such as T-shirts and the like. Uncle George mainly used herbicides because they were a labour-saving alternative to manual weeding.

Major challenges

Despite the company's fast growth in the Ghanaian market, Zhang Lin has faced a number of challenges along the way, broadly categorised as follows:

a. **The image of Chinese products.** From our interviews in Ghana we found that people viewed Chinese commodities as being of poor quality. Thus, how to improve local farmers' impressions of their products has become an important issue for them. Furthermore, there are also a lot of fake products on the market in Ghana, especially in Kumasi pesticide market. Some of these are counterfeits of Zhang Lin pesticide and are sold at half the price of the real product, thus hurting their public image and profits.

b. **The fierce market competition.** Although Ghana's agricultural market is very fiercely competitive, the majority of pesticide businesses are operated by agricultural trading companies and few companies are engaged in pesticide bottling. Thus Zhang Lin is the sole Chinese company that has established a bottling plant in Ghana. The pesticide products from China or Southeast Asia enjoy price advantages because they are relatively cheaper than those from Europe, Israel and the United States. Given that Zhang Lin Company's extended value chain involving a bottling plant in Kumasi and manufacturers in China, it enjoys a number of reduced production costs.

c. **The dealer's integrity.** For each pesticide company, local dealers who generally sell the products on credit play a critical role in working with farmers and retailers who have insecure incomes. However, some dealers often fail to pay or refuse to pay the purchase price in a timely manner after selling the product in the sales process. Establishing a network of dependable dealers who can still take some risks in extending customer credits is therefore a challenge.

d. **The foreign exchange losses caused by the changes in exchange rates.** All of the Chinese informants we spoke to lamented that it is currently not possible to directly exchange RMB for Ghanaian Cedis. Exchanges first have to be made into USD and then into the target currency. This therefore raises both currency exchange costs in general and the risk of currency fluctuations affecting profits. In recent years, Ghana's currency has started to depreciate, and its exchange rate against the dollar has dropped from 1:1 in 2006 to 1:2.4 now.

e. **The language barrier of Chinese management staff.** The language barrier has become the biggest obstacle between Chinese management staff and their local staff, as well as with relevant Ghanaian government agencies. In general, companies have full-time interpreters, but language is still a limitation to strengthening exchanges with each other.

Integration and interaction with the locals

Since the company is restricted to wholesale, the establishment and maintenance of stable relationships with local dealers is critical. In addition, the exchange with local staff in the company and linkages with local government sectors are also essential to their commercial success. The following section will look at how Zhang Lin has integrated itself into the Ghanaian market through sensitivity to social and cultural norms, and a dependence on both formal and informal interactions.

Interactions with local dealers

Case 1: Formal interactions – sales commissions

Zhang Lin has established its pesticide sales network primarily based on economic incentives. Within the company offices, a team of Ghanaian sales representatives are responsible for contacting local dealers to sell to smaller retailers on behalf of the company. Typically, the annual sales volume of each sales representative is 65,000 Cedis. After completion of the stipulated sales volume, they are allowed to obtain a commission of 50 Cedis based on additional sales of 100 RMB. The commission for sales in excess of the stipulated volume is paid directly by the company in the form of cash, thereby encouraging them to sell more products. All sales representatives employed by the company are local Ghanaians.

Their primary means of sale is through local dealers and retail agents. At present, the company has a relatively fixed number of about 40 dealers who buy their products to sell around the country. These dealers will typically buy from other pesticide companies too.

Case 2: Informal interactions – flexibility and assistance

Besides hiring sales representatives to develop their sales network, the Chinese managers of the company also pay attention to establishing relationships with local dealers directly, particularly for the dozen or so dealers who are 'big customers' of the company. Flexibility and informal assistance has also played an important part in the way they deal with their sales partners. On one occasion a local dealer's business suffered a fire in the Kumasi pesticide market. Zhang Lin helped him get over this crisis by directly providing him with large amounts of stock on credit. This helped the local dealer recover his business, and was an important part of forming a stronger relationship between him and the company. As the dealer told us:

> I have five stores. I was cheated out of 50,000 dollars a year ago, and the family was hit by fire as well. Now, I am very poor. The cheater said he would help me directly import from China, but he just swallowed the money. In June, my family was hit by fire. Since then, I lost all my money. I'll show you the picture if you do not believe me.

A Zhang Lin representative later explained to us:

> He was particularly unlucky at that time. Whenever someone asked for payment, he would take out the picture and say that he has no money because his family was hit by fire. After being cheated, he was not able to repay his debts. Before that, we would provide him with goods valuing 4,000-5,000 Cedis at a time, and he would repay about 500-800 Cedis per week. We have a long repayment period during which the dealer is usually required to repay every 7-10 days. When the dealer was affected by the fire and going to sell his store due to bankruptcy, Zhang Lin Company provided him 150 boxes of goods that were worth at least 15,000 Cedis on credit, thus allowing him to weather the storm. Other small companies dared not sell products to him on credit because he still owed a lot of money, and those companies were worried about how to recover their arrears from him. Only Zhang Lin, largely due to its economic strength, provided him 150 boxes of goods on credit, thus bringing him back to life.

Case 3: Informal interactions – social events

Lastly, it was also important for company employees to integrate themselves into local social events. A Chinese manager said to us when we interviewed him at Kumasi.

> To contact locals, (we) will participate in the activities organised by local residents. After all, we must establish closer relationships with them. So we will actively attend or be invited to attend all their activities such as wedding and funerals, etc. organised by major and stable customers. So for example, when we go to a wedding, we will usually give the bride and groom an envelope with 88.88 Cedis as a present in different nominal values (i.e. 50, 20, 10, 5, 3, 2 and 1 Cedis). In short, we must respect their customs and do as the Romans do. This involves knowing when to properly stand, sit and take photos. Usually such activities are over within two hours, and then we leave. The locals will usually stay to enjoy themselves longer, sometimes up till one in the morning. We cannot stand the prolonged activity, but we come just to show our sincerity.

These are networks that would have been built up in particular by the original YG Company CEO, LCD. Indeed, Zhang Lin's CFO explained that despite only maintaining 30 percent of the company's shares, XA has been happy for LCD to remain as CEO due to his extensive network and understanding of the local culture.

Interactions with local staff

For Chinese enterprises going out, hiring local staff is undoubtedly an important way to reduce labour costs. The results of the field interviews showed that local staff employed by Zhang Lin accounted for more than 80 percent of the total staff and the proportion of local management personnel was over 80 percent. But senior positions are still held by Chinese people, such as the managers responsible for finance, the warehouse, marketing and administration, while sales representatives and workshop management staff are Ghanaian.

Based on interviews, Chinese employees and Ghanaian employees are still evidently in a superior-subordinate relationship. From what we observed at the company headquarters in Accra, Chinese employees and local employees were working in different offices, of which Chinese managers had separate offices, and local employees shared the collective office.

Linkages with local government authorities

As the CCMC is the directly responsible pesticide authority, all foreign companies in Ghana are in regular contact with them. In an interview with CCMC officials they stated that they were visited by a lot of companies who brought samples for testing, applied for registration, and other such business every day. They explained that although Chinese pesticide products were commonly seen in the markets, there were actually few Chinese companies that were actually registered in Ghana. Rather, it was usually a case of local Ghanaian dealers obtaining licenses to import pesticides from China.

In addition, foreign companies also deal with the taxation authorities, the Standards Bureau and other governmental departments. Zhang Lin has a full-time Chinese secretary with a good command of English in charge of handling these external operations.

We also encountered another, smaller, Chinese importer in Kumasi's pesticide market who stated that they would deal with various departments using different strategies.

> We have a warehouse here. Although pesticides are tax-free, miscellaneous departments still want to find trouble. We have to bribe them, and if not, some of them will make trouble for us. For example, the immigration office comes to check your licenses, the police check whether you have expired immigration documents. Whenever New Year approaches the immigration office will come to extort money together with the fire station and the police. Actually, they want to get money using the excuse of a safety check (just as in China). Don't you note that police are particularly active in conducting door-to-door checks when New Year is drawing near (at home)? Of course, you know their real intention, and have to dismiss them by giving money. How much do we give? It depends on the number of people who come and our relationship with them. For one person, we might give between 10 Cedis at least and 50 Cedis at most

Relations with Chinese competitors

Zhang Lin Company has sought to keep its distance from traders and manufacturers from both Europe and China. A Chinese employee at Zhang Lin said they only see their Chinese competitors at activities organised by the embassy at the most.

The smaller Chinese pesticide traders in Accra mentioned above also said that they rarely had contact with anyone outside of their company. This was quite significant as it was only her and her brother who were based in Accra, with their father back in China. Otherwise there were a handful of Ghanaian employees and dealers they engaged with, but their networks were very limited, including with regards to the Chinese community and embassy. She told us,

> We do not directly contact farmers, but only deal with local dealers. We are not in contact with the government, the ambassadors or other Chinese people. As such, I have started using social media more to keep in touch with a few of my fellows and classmates back in China who are operating clothing, shoes and bag businesses from Wenzhou.
>
> The locals are quite friendly and helpful in Ghana. By contrast, the Chinese Ambassadors are of no avail. Chinese gold diggers were very nervous when the Ghanaian Government intended to expel them. They went to the embassy to seek help, but the embassy staff told them to go back and not to cause trouble for government.

This observation, more than any, summed up the difficulties faced by so many Chinese migrants that move to Africa. It is highly probable that just like this trader and the numerous gold miners she mentions, LCD would have first arrived in Ghana with little to no support from the Chinese state. His success in maintaining a small trading firm for twenty years and then forming a joint venture with China's biggest pesticide company is an amazing feat, and one that says a lot about the resilience a lot of Chinese migrants in Africa hold.

Conclusion and implications

In trying to understand what makes this company such a success in Ghana, the first point that emerges strongly is that context matters. Without the combination of surplus production in China, and favourable import terms in Ghana, it is questionable whether LCD would have found such a fortuitous business partner as XA in the first place. However, undoubtedly, their success seems to be extremely interdependent. Whereas XA brought the capital and the goods, LCD (and his company YG) was able to form networks and navigate through both official and informal channels to make the business a success. Many other migrants that moved to Ghana will have surely failed before coming anywhere near this sort of success, and indeed those stories are just as important.

Hence, it is Zhang Lin Company's unmitigated success in just a short space of time that suggests that this company is quite unique. Although many Chinese companies appeared to be exporting their goods to Ghana through local Ghanaian dealers, there were still relatively few that had physical sales offices on the ground. In our fieldwork we only encountered two other Chinese agrochemical traders, both of which were significantly smaller in size. Clearly Zhang Lin has enjoyed the benefits of being the 'first mover' in this respect;

however, it is impressive that it has also succeeded in significantly beating the established international competitors, largely due to price.

In terms of the bigger picture, this study also helps us to 'myth bust' some surprisingly common beliefs. To those who think of Chinese communities in Africa as largely keeping to themselves, here we have a company that built its success on forming personalised business networks in local communities, to the point of attending local partners' weddings and other family events. To those who talk about the role of the Chinese state directing private companies towards its strategic interests in Africa, this company established itself entirely independently. And to those who consider Chinese products to be of inferior quality, we have here a country that rigorously tests and monitors agrochemicals upon entry, and yet the majority of the market is now dominated by Chinese agrochemical imports.

In summary, the experience of Chinese companies in Africa can never be said to be homogenous, but neither can it be said to have a strict plan or guidelines to follow. Rather, this story presents a company that drew on all of its available networks to succeed, involving a mixture of Chinese investors, Ghanaian sales networks and even European banks among other key actors. As a whole, though, this study presents just one part of the bigger story of Chinese agricultural companies' business activities, challenges and successes in Africa.

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End Note

1 Names in this study are anonymised unless otherwise stated.

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