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WHERE AFRICA MEETS ASIA: CHINESE AGRICULTURAL AND MANUFACTURING INVESTMENT IN MADAGASCAR

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Abstract

Madagascar's abundant natural resources, low labor costs, and geographic location make it a potentially attractive destination for Chinese outward investment as rising wages in China and domestic competition increasingly drive firms to "go out." The current wave of Chinese investment in the country may have significant implications for the development and potential transformation of the Madagascan economy, particularly through the agriculture and manufacturing sectors. Having generated its own economic boom with the help of foreign investment, can Chinese overseas investment play a similar role in fostering technological spillovers and upgrading in other low-income countries? Our research finds some evidence of limited technology transfer occurring from Chinese firms in Madagascar, yet currently, Chinese investment remains small in scope, and is also constrained by a problematic policy environment.

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1. Introduction

As China's current economic boom has resulted in a growing wave of outward investment and migration, Madagascar has become a salient destination for companies moving abroad. Its large supply of fertile arable land, and its land endowment conducive to food production, has made agriculture a key sector for potential foreign investment. The Malagasy government has also worked to develop its light industrial sector in recent years. The current wave of Chinese investment in the country may have significant implications for both of these sectors, and for the development and potential transformation of the Malagasy economy. China generated its domestic economic boom in these sectors with the help of foreign investment. Whether Chinese overseas investment can play a similar role in fostering technological spillovers and upgrading in other countries is a pertinent question, particularly relevant in Madagascar, a country with vast natural resources, but where per-capita GDP growth has stalled in recent years.

This paper reviews the state of the agricultural and manufacturing sectors in Madagascar, and the policy environment that impacts their development. It investigates the current patterns and trends of Chinese overseas investments, and their potential effect on the agriculture and manufacturing sectors, in the context of technology transfer and economic spillovers.

2. Political Economy of Madagascar

Sino-Madagascan Engagement in Historical Perspective

Madagascar was settled between 200 BC and 500 AD, with the first settlers arriving from the Indonesian archipelago by outrigger canoe.[1] Multiple groups from Malaysia, China, and the African continent soon followed.[2] The French established a colony in Madagascar in 1896 and moved to develop the island's infrastructure. Between 1896 and 1902, the French brought waves of Chinese and Indian immigrants to Madagascar to meet their needs for cheap labor, working in excavation, on construction, and on the transport of materials. These new immigrants merged with other groups of Chinese Cantonese speakers who had previously settled Madagascar, via Reunion and Mauritius. The Chinese population on the island grew substantially over the following decades, and by 1929, it totaled 2,225.[3] These groups formed the backbone of what would become today's Sino-Malagasy community, which continued to grow in waves for over four decades. However, following the resignation of Madagascar's first president, Philibert Tsiranana, in 1972 and the lasting instability that ensued, 3,000 Chinese people emigrated from Madagascar in a period of 25 years.[4]

In the past few decades, Madagascar has become a prominent destination for Chinese companies moving abroad. Its geographic location and existing Chinese population make Madagascar an attractive destination for Chinese investment and aid projects. Enticed by commercial ventures in the country, a "second wave" of Chinese people migrated to Madagascar beginning in the 1990s, most of who specialized in trade and commerce, and opened shops selling Chinese-produced consumer goods in the country. The majority of these new settlers made a livelihood selling goods that competed with local Malagasy-produced wares. This fueled a negative perception of the "second wave" Chinese among locals.[5] According to Tremann (2013), Madagascar is now home to the third-largest Chinese population in Africa. Economic exchanges between China and Madagascar have grown to such a point that the director of a Malagasy enterprises group routinely travels to Guangzhou to showcase the country's goods.[6]

The Malagasy Economy (pre-2009)

Madagascar's political economy in recent years has been marked by a number of crises and critical junctures: political crises occurred in 2002 and most recently in 2009, when president Marc Ravalomanana was overthrown in a coup d'état. The period under Ravalomanana was characterized by economic reforms and economic liberalization that was controversial in Madagascar. Between 2002 and 2009, Madagascar's foreign direct investment (FDI) inflows grew roughly 18-fold, from comprising 1.4 percent of the country's GDP to 12.9 percent.[7]

Over this period, mining was the largest and fastest growing export sector of Madagascar's economy. In 2008, it represented 73.32 percent of the total value of incoming FDI. At that point the Chinese were relatively absent from Madagascar's formal mining sector, and mining occupied less than 0.1 percent of Chinese investment in the country in 2008.[8] The construction, public works, and civil engineering sectors also contributed to Madagascar's growing FDI inflows. In 2008, they accounted for 5.58 percent of total investment, but the Chinese were particularly active in this domain. That year, 75 percent of Chinese FDI to Madagascar was concentrated in the manufacturing, construction, and public works sectors.[9] In 2008, telecommunications also occupied a significant part of Madagascar's inward FDI. To enhance its telecommunications network quality, Madagascar embarked on the development of fiber optics. Intense competition in its mobile phone sector and the Malagasy market's potential encouraged the flow of FDI in this sector.

Madagascar's large supply of fertile, arable land, and its land endowment conducive to food production made agriculture a key sector for foreign investment in the 1990s and 2000s. Furthermore, Madagascar benefited from the African Growth and Opportunities Act (AGOA), from the act's inception in 2000 until 2009. This resulted in a flourishing textiles sector and, in turn, an upswing in cotton farming. A budding cluster surrounding textile production arose. This also contributed to an increase in FDI until 2009. However, despite this cluster, agriculture and livestock rearing represent a very small part of Madagascar's FDI inflows, representing only 2.63 percent of total FDI inflows in 2008.

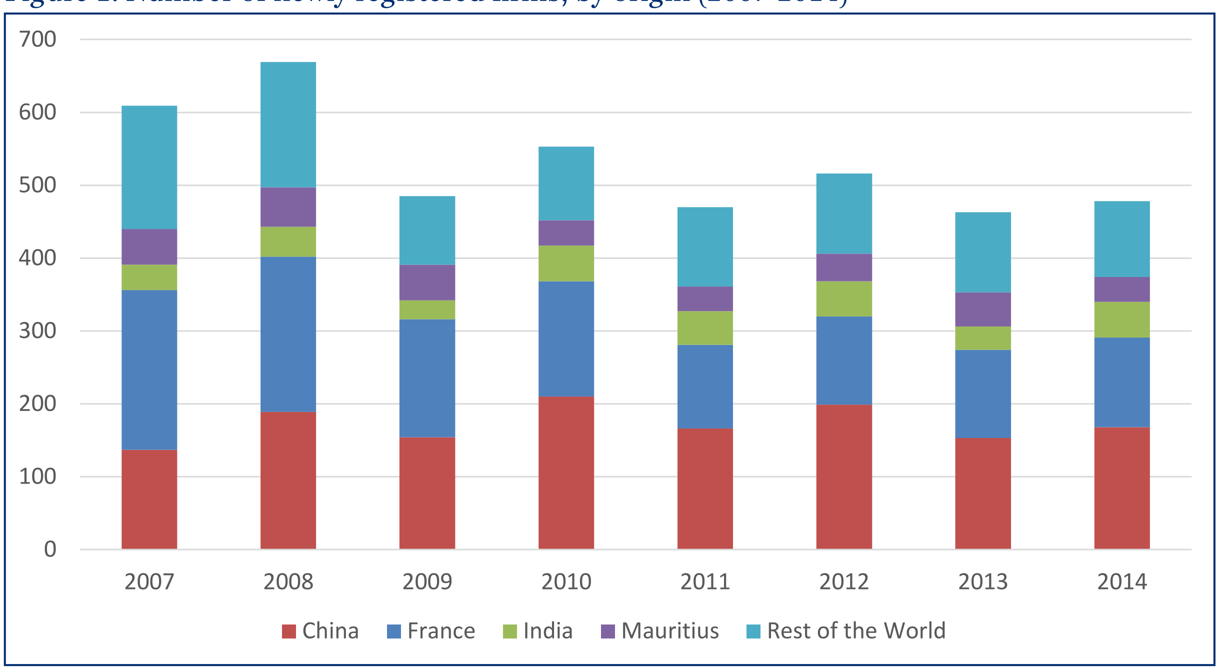
In 2008, China represented Madagascar's ninth most important source of FDI. That year, China invested US$60.66 million in Madagascar, all but US$10,000 of which went to sectors other than mining. According to ex-finance minister Jean Razafindravonona (2009), and based on 2008 data, 45 percent of the Chinese companies investing in Madagascar operated in the manufacturing sector, 14 percent in the construction sector, and 13 percent in the telecommunications sphere. Of the total recorded Chinese FDI for 2008, 35 percent was structured as joint ventures between Chinese and Malagasy local firms. Within manufacturing, this figure stood at 23 percent.[10] We can expect that joint ventures are more likely than wholly foreign-owned firms to provide important opportunities for technology transfer.

The 2009 Political Crisis

On March 21, 2009, the democratically elected government of businessman Marc Ravalomanana was overthrown in a coup led by radio DJ-turned-Antananarivo-mayor Andry Rajoelina. Subsequently, the U.S. government revoked Madagascar's AGOA status. Following the crisis, Madagascar's economy, which had enjoyed high growth levels and substantial foreign direct investment inflows under AGOA, grinded to a halt. Its per capita gross domestic product, which had averaged 2.64 percent growth for the previous five years, shrunk by 2.15 percent per year between 2009 and 2013.[11] Part of the backlash against Ravalomanana had roots in popular sentiment against foreign investors, particularly perceived "land grabs" by foreign investors such as Daewoo, whose agreement with the government for a 99-year land lease of 1.3 million hectares had fueled popular discontent. The agreement was axed by the transitional government.

The coup resulted in a massive exodus of foreign capital from Madagascar's economy. Rajoelina's government was supposed to represent a temporary solution to Madagascar's political problems. However, it held on to power until 2013. While many factors contributed to Madagascar's economic downturn during this time, the loss of AGOA status had a particularly significant impact on the island's industrial sector. A slew of garment manufacturers, chiefly based in China, France, Hong Kong, India, and Mauritius, left the country shortly after the policy change. Most had moved production to Madagascar because, on the one hand, it represented a perfect location for textile manufacturing with its abundant cheap labor, and on the other, because they could get preferential tariffs to the U.S. market by producing there. In leaving, they took with them the foundation of what might have developed into a substantial economic sector. While some firms elected to stay in Madagascar, they remain relatively few in number.

Figure 1: Number of newly registered firms, by origin (2007-2014)

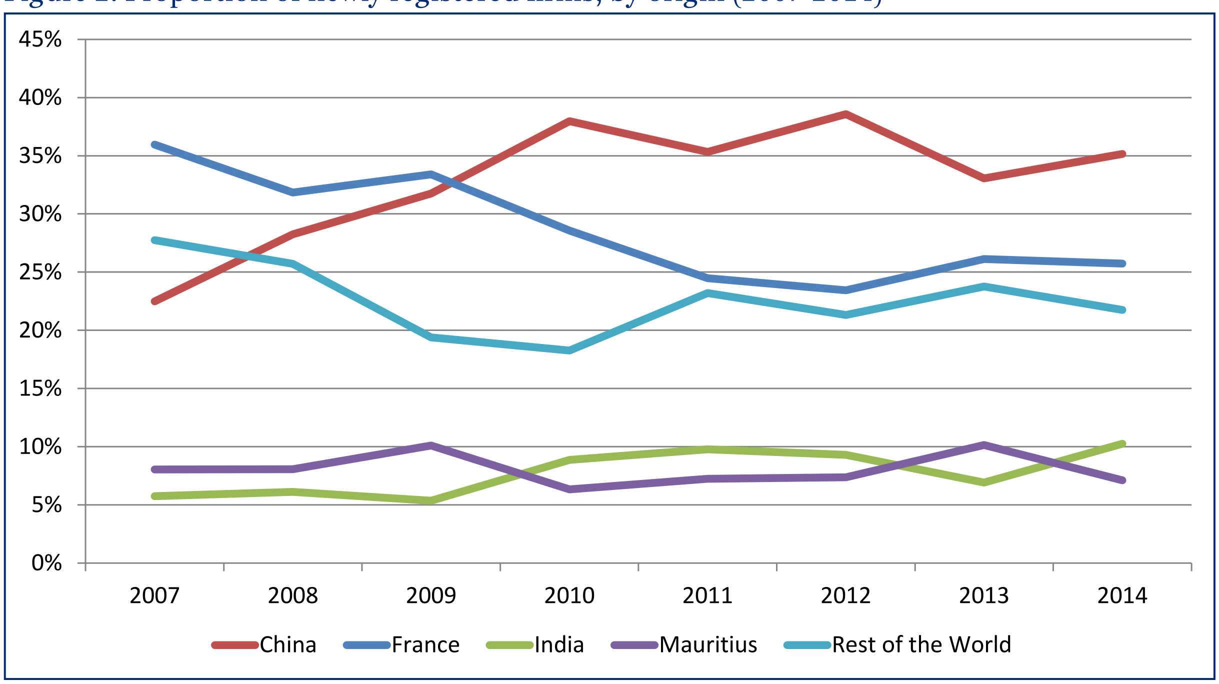


As shown in Figure 1, the number of new companies registered in Madagascar prior to the crisis was substantial and growing. However, the 2009 crisis resulted in a 30 percent decrease of new entrants to the economy in the short span of a year. The number of new companies being created in Madagascar, which represents a useful indicator of its economic health, has yet to reach the levels observed in 2008.

Also as shown in Figure 1, the origin of companies establishing themselves in Madagascar has remained roughly consistent after the crisis. In other words, potential investors from all over the world seem to have been deterred by Madagascar's shaky political landscape. Interestingly, the proportion of companies of Chinese origin being set up in Madagascar grew in the year of the crisis, and the following year (see Figure 2). This is because, while the number of new Chinese firms registered in Madagascar decreased in 2009, it bounced back quickly relative to that of the other countries present in our data. Meanwhile, the negative effects of the 2009 political crisis on newly registered companies lasted well beyond 2009 for all the countries present in our data, except China and India.

Our data sources show that the Chinese are still very active in Madagascar. However, the 2009 political crisis and the related sanctions, including the cancellation of Madagascar's AGOA status, had a profound effect on the Malagasy textiles sector and the Chinese companies that were involved in the sector. That said, the number of Chinese companies involved in cotton production in southwest Madagascar is growing, and other agriculture and aquaculture-related ventures are succeeding in the country. Furthermore, in 2010, a massive investment by Chinese Wuhan Iron & Steel Company (WISCO) completely changed the picture of the Malagasy mining sector. That year, the company paid US$100 million for exploration permits in the Soalala region. That money helped keep Rajoelina's cash-strapped administration afloat. WISCO stated explorations in 2011, and the project is projected to be the largest mining endeavor in Malagasy history.

Figure 2: Proportion of newly registered firms, by origin (2007-2014)



Free Zones and Duty-Free Policies

Madagascar saw relative success with its special economic zone (SEZ) programs in the 1990s, although the 2009 political crisis and the AGOA-related sanctions led to a steep decline in employment levels and output in these zones. However, they remain a significant area for potential industrial clustering, particularly for Chinese investors.

Madagascar's model is categorized by the World Bank (2008) as a "Single Factory EPZ," which means that incentives are provided to individual registered enterprises regardless of location, and factories do not have to locate within a designated zone. Two private zones primarily dedicated to making apparel and textiles were established in 1991.[12] Currently there are no state-sponsored industrial zones in the country. However, the government has recently been exploring potential initiatives with Mauritian cooperation.[13] Chinese and Hong Kong textiles and manufacturing investments have clustered in the industrial zones outside Antananarivo, although Chinese firms are relatively low in number compared to those of French and Mauritian origin.[14] We find that the duty-free status and tax benefits that the "free zone" areas grant have been attractive for Chinese and other foreign enterprises investing in Madagascar.[15] One Chinese firm interviewed was actively involved in the GEPF (Le Groupement des Entreprises Franches et Partenaires, or Free Zone Group), a business association that lobbies the government to maintain the members' tax-exempt status. However, most Chinese firms were not part of these broader business associations.

3. Methodology and Data

This research began with a desk study of Chinese investments in Madagascar identified from a number of sources, including a list of approved investments (US$10 million and above) obtained from the Chinese Ministry of Commerce (MOFCOM). From this desk study, we identified key stakeholders and firms in the agricultural and manufacturing sectors to interview during our fieldwork in Madagascar. Through snowball sampling, we used these interviews to identify other firms that did not appear in our initial review. We conducted semi-structured interviews with key Malagasy government personnel, as well as with Chinese firms.

In the field, we contacted the MOFCOM office in Antananarivo and representatives from the Chinese Chamber of Commerce, who were able to put us in contact with key firms operating in the area. Talking to these firms, we were then able to "snowball" to other firms. Chinese managers we spoke to were aware of the full gamut of existing Chinese investment in the country, and were generally happy to put us in touch with their counterparts from other companies. From these interviews, we traced the history of the investments and their linkages with other firms (upstream and downstream), as well as relations with Malagasy domestic actors and institutions.

The bulk of our field research took place in the bustling Malagasy capital of Antananarivo, which is also the heart of its economy. Antananarivo is home to multiple industrial zones, which are equipped with better business infrastructure than the rest of the country. In addition, we conducted interviews in the south-western coastal town of Toliara, where three major Chinese cotton producers operate.

Another investment cluster, located in the north of the country, in Mahajanga and the areas surrounding Nosy Be Island, would have represented a worthwhile research destination, as it is home to large Chinese investment projects in the aquaculture sector, as well as other agricultural projects. Toamasina, a city and major port in the Northeast, was also an important location for many Chinese firms involved in import-export activities. However, due to logistical and budgetary constraints, it was not possible for us to visit these sites.

We tried to estimate the total number of Chinese firms operating in Madagascar by triangulating Chinese and Malagasy sources. We used two primary sources: China MOFCOM's firm approval database (see Appendix 2), and a database from the Malagasy government statistical agency (INSTAT) to compile estimates of numbers of agricultural and manufacturing firms of Chinese origin (see Appendix 3). We applied over 25 keyword filters to the datasets in order to count businesses that listed manufacturing, agriculture, or some kind of processing, transformation or value-added activity in their activities. These datasets were then manually culled, in order to remove minerals exploration and non-relevant businesses, and to reflect our best estimate of the agricultural and manufacturing firms active in the country.

From the MOFCOM approval data, we found 22 firms that listed "processing" activities—mostly agriculture and manufacturing firms, but also several firms working in mineral exploration and exploitation, a majority of which were state-owned. Of these, we identified 15 firms in the agriculture or manufacturing sector. Our analysis of INSTAT Madagascar's yielded a much larger number: our keyword filters highlighted approximately 86 firms engaged in "processing" activities, of which we estimate 54 firms with investments in the agriculture or manufacturing sector—over four times the MOFCOM figures.

As documented below, both data sources are flawed to a certain degree: the Chinese source only lists large firms and provincial and central state-owned enterprises (SOEs), neglecting smaller enterprises. Meanwhile, the accuracy of the Malagasy government data is questionable, and appears to overestimate the number of Chinese firms.

4. Field Research Findings

Our fieldwork revealed that, despite the large Chinese diaspora and numerous Chinese businesses ostensibly operating in Madagascar (according to MOFCOM approvals and the Madagascar registry), the number of Chinese firms that have actually invested in Madagascar and are carrying out manufacturing activities there is generally low.

Appendix 1 shows the overlap in the number of firms listed in each primary dataset and uncovered during fieldwork investigations. Appendices 2, 3, and 4 provide complete accounts of the "manufacturing and agribusiness" firms that appear in China's MOFCOM list, Madagascar's INSTAT database, and in the authors' fieldwork, respectively.

The MOFCOM list contains 22 Chinese firms operating in Madagascar, seven of which are described as being involved in agricultural activities. The vast majority of these firms engage in large-scale industrial and extractive activities, such as infrastructure development, manufacturing, and mining, and most of them are state-owned. For these reasons, they operate through formal channels, and sometimes ask for assistance from Chinese government representatives in the country. On the other hand, as explained by a MOFCOM official interviewed during our fieldwork, companies operating in trade and artisanal mining generally do so without engaging with MOFCOM's Madagascar office and, therefore, are not included in its data.

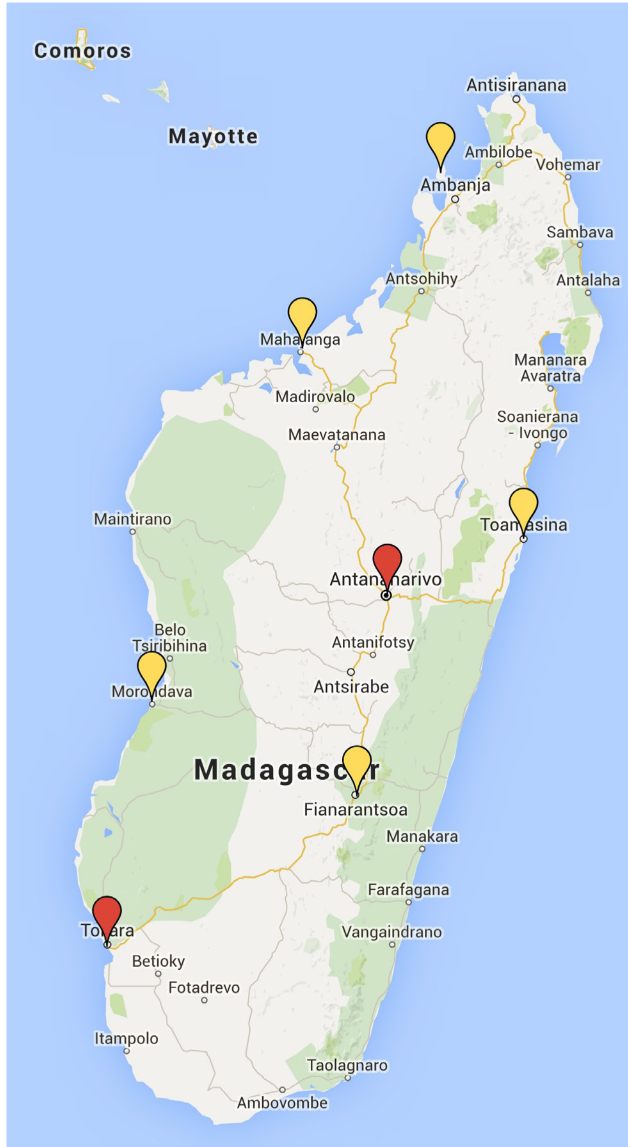


Figure 2: The red markers show the locations visited as part of our fieldwork; the yellow indicate other sites where we were able to confirm the presence of Chinese investments. *Map data: Google, 2015.*

The full list of Chinese firms collected by INSTAT contains information on 1,343 entities of varying sizes operating in different sectors. This list conflates Chinese firms originating from Mainland China with the ones based in Hong Kong. It also lists firms owned by Malagasy (and Mauritian) individuals of Chinese origin with no formal ties to China. The authors visited at least five firms listed on the INSTAT list for which this was the case. Additionally, the INSTAT list contains Korean and Japanese firms, which are listed as Chinese (it presumably also does so with firms from other East Asian countries, but the authors only uncovered this phenomenon first hand with Japanese and Korean firms). The authors applied several keyword filters to the INSTAT list to reflect only those firms that mentioned manufacturing, processing, or agricultural activities. From this we estimate around 54 Chinese firms, five of which also appear on the MOFCOM dataset.

Finally, the authors' list (see Appendix 4) details the Chinese firms—with a presence in Mainland China—that were visited in person for this work (see Figure 2). As shown in Appendix 1, seven of the visited firms were included on the MOFCOM list, while six of them were present in INSTAT's database. Only four of the firms visited were present in both sources, while two were not found in either. These numbers illustrate the limited convergence of the two data sources, as well as the importance of fieldwork verification.

The majority of Chinese enterprises recorded operate as traders, exporting and importing goods with little processing. However, there are some sizable investments, notably in agriculture, as well as a few significant Chinese manufacturing firms operating in Madagascar. We identified one emerging cluster in the cotton sector, while aquaculture is another area that has seen significant Chinese investment, mostly for export purposes. While some of these investments are large in scale, they remain small in number and widely dispersed across the island. Furthermore, almost all of the firms we spoke to described difficulties in doing business in Madagascar, and it is clear that the country's political crises in recent years have had a grave impact on private investment in the country.

We came across some firms that produced light manufacturing and housewares, as well as one large textiles project, but the overall level of investment in the manufacturing sector was relatively low and appears to have been on the decline for a number of years due to the unstable political environment. Following the 2009 political crisis, Chinese investment in textile manufacturing in the country plummeted. The loss of AGOA status struck a blow to many export-oriented firms in the textiles and garments sector, and led to the exit of many firms from the country. However, the renewal of AGOA for Madagascar in mid-2014 may create some incentives for manufacturing activities to resume.

Some Chinese firms we interviewed engaged in technology transfer, primarily through human capital development and training programs. However, this was not a systematic trend. Chinese firms, on the whole, have weak links with the local economy. Aside from specific agricultural investments, there were few cases of firms using local suppliers and raw materials for value-added production, indicating that these kinds of backward linkages are only weakly present as a mechanism for technology transfer. Although many investors we interviewed were optimistic about Madagascar's economic potential, the country's current policy landscape seemed to provide little incentive to create such linkages.

Sectors of Investment

Over the course of our visits to Antananarivo and Toliara, we identified the following industries within the agriculture and manufacturing sectors with significant Chinese firm investments or clusters. These firm clusters are relatively few in number, but represent the key industries in which we observed Chinese involvement in the Madagascan economy.

AGRICULTURE

- **Rice**. Rice is arguably the most important staple crop in Madagascar, as the Malagasy are the largest per-capita consumers of rice in the world. Yet, Madagascar is currently a net importer of rice.[16] With its vast land resources, Madagascar would seem to have significant potential as a rice producer. However, its yields have remained low (around 2 tons/ha), and per-capita yields have fallen over time due to the continued use of traditional cultivation methods and technologies.[17] Unsurprisingly, this area has garnered some interest by Chinese investors, such as Hunan Agri, which had previously been involved in a five-year development cooperation project focusing on hybrid rice. As part of the project, which ended in 2011, Hunan Agri operated a demonstration center outside of Antananarivo. Hunan Agri also has a subsidiary company—Chengsheng—that is active in Madagascar.

Chengsheng seeks to expand cassava production in the north of the island, near Toamasina. As of 2015, Chengsheng was still in negotiation with the Ministry of Agriculture for the usage of land in the area.

- **Cane sugar.** The major Chinese player in the sugar industry is SUCOMA, which manages sugar cane plantations in the north and west of the island, in addition to four sugar processing plants. In December 2014, labor disputes between plant managers and striking workers at its sugar plant in Morondava escalated, leading to the destruction of the factory and the surrounding fields, as well as the evacuation of the Chinese personnel from the region. SUCOMA still operates in other sites, and it is still in negotiation with the government for compensation for the losses it suffered in Morondava.

- **Aquaculture**. Two of the companies listed in the Chinese Ministry of Commerce's Madagascar directory are involved in aquaculture, especially in processing live fish and shellfish for export: SOMAQUA and Longfei (a subsidiary of cement producer Maloci), which both operate in Mahajanga on the northern coast of the island. Fish and seafood represent some of the major Malagasy exports permitted in Mainland China. Although both firms primarily operate as exporters of fish and seafood bought from local sources, they have also invested in establishing facilities and plants for the farming of seafood for export. For example, Longfei has a holding plant for this purpose in Ivato, near the airport that serves Antananarivo.

- **Meat packing and processing**. Cattle raising and animal husbandry represent important industries in the west of the island, and a number of Chinese respondents commented on the inexpensive, high quality local beef found in Madagascar, which some even referred to as "organic." There is at least one large Chinese-owned slaughterhouse in Toliara, and other slaughterhouses of Chinese and Indian origin that operate in the same area, allegedly without permits, and possibly illegally. These firms are limited to slaughtering and packing operations, with no involvement in animal husbandry. The cattle is purchased at local markets, which has led to some negative impacts on the supply chain following a spike in demand, as discussed in sections below.

- **Cotton**. There is a small cluster of firms from Mainland China and Hong Kong involved in cotton production and processing in Toliara. This represents a recent trend, and five firms are now involved in the cotton industry in Toliara, three of which are Chinese or Hong-Kong owned: Tianli Agri, Chimad, and MSG. The largest, Tianli, is a Chinese cotton spinning firm with a large operation in Mauritius, which aims to use Madagascar as the primary source of its cotton supply chain. As land ownership by foreigners is illegal in Madagascar, most of these firms also operate on a basis of contract farming arrangements, supplying seeds and inputs to local farmers and buying back the cotton crops. However, this has presented challenges for many of the firms we interviewed, as discussed below.

MANUFACTURING

The manufacturing sector remains small in Madagascar, with few Chinese and Hong-Kong firms operating locally. Most manufacturers we encountered were of French or Mauritian origin.

- **Textiles**. Historically, Madagascar has had a strong textile and knitwear sector, with significant investments from export-oriented Sino-Mauritian, French, or South Asian firms. However, the textile industry has been in decline for a number of years, due in part to the 2009 political crisis and the revoking of Madagascar's AGOA status, which led many of these firms to relocate to the African mainland, or to other Asian countries such as Bangladesh. Of the Chinese/Hong Kong firms that remain, King Deer Cashmere, based in the Forello industrial zone in Antananarivo, is the largest and most prominent. It employs approximately 4,300 workers, the majority of whom are local, and has emerged largely unscathed from the economic squeeze felt by other firms.

- **Cement and construction materials**. While not a cluster, one of the larger and most established Chinese firms operating in Madagascar works in the cement and construction sector. Maloci (also registered as Longfei) is a Chinese-owned cement production enterprise. Although it initially started up as a cement plant, the firm is now involved primarily in trade, particularly the export and import of aquaculture products, minerals, and construction equipment. The owner has expressed plans to create an industrial park specializing in construction materials in the future, but the progress on this front has been slow.

- **Fenestration and light manufacturing**. A small but growing cluster of Chinese firms was identified in the light manufacturing of doors and windows, including Future Development Corporation (FDC), Socavitre, and Tometal, all of which are based in Antananarivo. FDC, the largest of the three, is Chinese-owned. It was first established in Madagascar, and has around nine distribution centers across the island. Although they are too small to be registered with MOFCOM, these firms are registered with the Malagasy government, and there is a sense of competition among them.

- **Other**. Aside from the few, relatively large, Chinese firms long-established in manufacturing, which exist alongside Sino-Malagasy firms, Chinese investment in the manufacturing industry has been relatively limited in recent years. One example of a relatively recent investment is the China Overseas Engineering Group (COVEC), which took over the management of a pharmaceutical plant, NIPHAR, based in the Forello industrial zone. Although it was originally intended for the production of medicines, the plant is largely non-operational, and its current production is limited to repackaging and labelling medicine provided by USAID.

OTHER INVESTMENTS

- **Mining**. Chinese companies have expressed strong interest in the mining sector, exemplified by the massive project currently being developed by Chinese Wuhan Iron & Steel Company (WISCO). Once operational, this will represent the largest mining project in Malagasy history. The project was temporarily suspended in 2013, because it did not fulfill some construction commitments made to the government in exchange for the permit, but it is now back on track. Madagascar is also home to a great deal of Chinese artisanal mining, particularly in the precious stones sector.

- **Construction**. The most visible evidence of Chinese investment in Madagascar is in its construction sector. The major players in that sector include COVEC, the Nanjing South

Construction Company, and Hua'an international Construction Ltd. (widely known as SOGECOA). SOGECOA was responsible for building many important government projects, including renovations at the Ivato airport and the Paon d'Or (Golden Peacock) five-star hotel.[18]

5. Analysis

Investor Motivations

The government (often mistakenly) classifies many enterprises as "Chinese," yet this group is far from a homogeneous bloc. Many "Chinese" firms are owned by the descendants of the first wave of Chinese migrants to Madagascar. While they retain Chinese or Cantonese names, few of these firms have ties to China, and most do not consider themselves Chinese. For example, Salone, a company based in Antananarivo that makes instant noodles and processed foods, was referred to as a "Chinese" firm by Malagasy interviewees, but it does not consider itself Chinese.

Even among the "new Chinese" investors in Madagascar, there appear to be two distinct groups: an older wave of firms from early development projects and a newer cohort of investors from the past five years. The firms and investors who have long histories in Madagascar spanning over a decade often comprise staff of Chinese development projects, who used their previous personal experience in Madagascar to establish new businesses after the completion of the projects they worked on. Mr. Li Yaomin, of Longfei Maloci, represents a perfect example of that phenomenon. According to interviews with his daughter, he has been an Chinese expatriate in Madagascar since 1988, and was sent there initially for an unspecified Chinese development project. After the project's completion, he decided to stay and utilize his connections to secure 1,000 hectares of land in Mahajanga for a fish and live seafood export business. This later expanded, and resulted in the Maloci cement plant, which started in 2007 with the aim of contributing to local businesses through domestic cement production (a resource that was previously largely imported). A longtime resident, Mr. Li has become a point of contact for other Chinese entrepreneurs seeking to invest in Madagascar, among whom his plans for an industrial park have gained much interest. Mr. Li's daughter, who is involved in managing the aquaculture side of the business, commented they had no problem attracting other potential investors, noting "my father is very well-known in Madagascar...they find us."

Similarly, Mr. Liu, the manager of Hongyuan Machinery, first arrived in Madagascar in 1980, as part of a Chinese development project that built 240 kilometers of the road connecting Antananarivo to the port city of Toamasina. After several return trips to Madagascar in the 1990s, he decided finally to set up a business there in 2001. His company specializes in agricultural machinery and electronics, which are imported from China and sold on the domestic market in Madagascar. Mr. Liu now acts as Vice-President of the China-Madagascar Friendship Association, serving as a go-between for Chinese investors and the Madagascan government.

Other established firms such as King Deer Cashmere (KDC) and Future Development Corporation (FDC) were also early arrivals. Madagascar was KDC's first "going out" venture, back in 1997, and it has since branched out with another plant in Cambodia. Like many other textiles firms from Hong Kong and China, KDC initially came to Madagascar to get around export restrictions placed on China, such as the Multi Fibre Agreement. It was able to take advantage of the country's AGOA status until 2009—although it has since focused on the European market (benefiting from the Everything But Arms treaty) and the South African and East African markets. The company operates on a "both ends overseas" (*liangtouzaiwai*) model where inputs (wool) come from China's Inner Mongolia province, and outputs (sweaters and knitwear products) leave the country for European and American markets. This export-processing model allows it to enjoy preferential tax and customs policies, which has strongly influenced its decision to invest.

Future Development Corporation (FDC) was established at around the same time, in 1998, as part of the first wave of Chinese investors "going out." According to interviews with the plant manager, the original Chinese founder, like those of Hongyuan and Longfei, had come to Madagascar to work for another Chinese company, and then decided to stay for personal reasons: the manager commented that he stayed in Madagascar "because of *yuanfen* [fate, coincidence]." Importantly, such decisions are also economic in nature: for both King Deer and FDC, the low cost of labor is an important factor in their decision to operate in Madagascar, particularly as labor costs in China continue to appreciate. While King Deer serves the export market, FDC has a found a profitable niche in the domestic market in Madagascar. Its owner initially started in the textiles sector, but switched to aluminum after seeing the poverty of the country. He has since moved on to manufacturing higher value goods, such as doors and windows.

Most new entrants over the past five to ten years have operated primarily in the agricultural sector. Hunan Agri, which has one of the largest Chinese investments in Madagascar, first entered as part of a development cooperation project to promote hybrid rice, and stayed for commercial reasons. In fact, many firms commented on Madagascar's abundant natural resources and its agricultural potential. For example, the manager of the Hongtai abattoir, located in Toliara, cited the cheap and plentiful natural resources to be found in Madagascar as a reason for investing. Moreover, the general absence of pesticides or hormones in farming in Madagascar means the products can be sold as "organic," he explained, commenting that, "environmental sustainability is a big thing in China now, a big selling point."

A large number of the agricultural investments encountered through our fieldwork are brownfield, where existing factories and capital are purchased and taken over from previous investors. Chimad, a Hong-Kong Chinese cotton processing plant (ginnery), and one of the three Chinese cotton investors in Toliara, was purchased initially from an Indian firm called Ashima, which closed down. The low price for a ready-made factory was an attractive opportunity, as the director of Chimad quipped: "When we go so far away, we are looking for profit!" Likewise MSG, a rival cotton firm, purchased its plant in Ambilobe from a French company. Somaqua, an aquaculture company based in the north of the island was also a brownfield investment: the firm was a product of a joint purchase of the previously Japanese-run Madagascar Fisheries company by the China National Fisheries Corporation, together with the Japanese Maruja Group, in 2009.

The largest agricultural investment was Tianli Agri, with an investment of approximately US$60 million in cotton and, according to its chairman, over 40,000 hectares of cotton fields planted and managed by local contracted farmers. The company started as a cotton spinning factory in Mauritius, where it exports to the South African textiles market and elsewhere. However, in the past five years, it began to look for upstream investments to secure better quality raw materials for its downstream cotton spinning plants. After buying cotton from farms on the African mainland, including in Zimbabwe and the Ivory Coast, the chairman of Tianli turned to Madagascar, seeing potential in its temperate climate and unpolluted environment to supply high quality organic cotton for its supply chain. The Chairman shared his ambitious vision for the country: "I want to see Madagascar as a cotton country," he said, "When people think of cotton, they will think of Madagascar."

Training

One of the key mechanisms through which foreign investment can facilitate technology transfer is through skills transfer via on the job or formal technical training. While our field research revealed some positive cases of this form of technology transfer, it is too early to tell whether this will lead to significant skills upgrading in the long-term. In general, employment opportunities for the Malagasy in Chinese firms are primarily unskilled roles encompassing very informal technical training, usually done on the job during an initial probationary period.

At the cotton ginning plants we visited, for example, the training is very short, ranging from two to three days and conducted by Chinese technicians who teach the Malagasy how to use the Chinese-imported equipment. One exception is Chimad, whose owner noted that the workers and machines from the old firm had remained after being acquired by Chimad. Therefore, there was no need for Chinese technicians, as the Malagasy workers were already familiar with the U.S.-made machines. "They are the ones teaching me," he quipped.

Similarly, industrial firms such as Maloci Cement and King Deer Cashmere generally conduct training on the job. At King Deer Cashmere, new workers are subject to a three month probation period, with one month of in-house training. For workers trained on the newer digital knitting machines, however, the training takes longer. Formal training requires up to three months, and workers generally require a year to become fully proficient with the equipment. As such, they have had a high rate of staff retention, and most of the staff are permanently employed. KDC was the largest employer of Malagasy workers that we witnessed, with 4,300 staff in 2015. Yet, they noted that at their peak prior to the financial crisis, they had 5,000 employees. They aim to reach this capacity again in the coming years.

FDC, which manufactures windows and doors, more strongly emphasizes labor training than other firms. The manager described their system of apprenticeships for the construction of door and window models on the assembly line: each worker starts out as an apprentice to an existing worker and is mentored in a *liushuixian* or "flowing water system." Training might take anywhere from four or five days to one month, and lasts until apprentices become proficient in production.

There have also been a number of training centers and initiatives established by, or with involvement from, Chinese investors, particularly in the agricultural sector. The largest case is that of Hunan Agri, which initially entered Madagascar in 2007 through a Chinese foreign aid project initiated at the invitation of the government to promote hybrid rice production in Madagascar. Hunan Agri set up an agro-technology demonstration center (ATDC) 30 kilometers outside of Antananarivo to teach local farmers in the community to grow hybrid rice. Although the aid project ended in 2013, Hunan Agri stayed on to develop rice and—more recently—cassava production in a commercial capacity.[19]

"The country has a lot of rice paddies, but their cultivation and techniques are very basic," said Mr. Zhang, the director of Hunan Agri and Chengsheng. A for-profit company, Hunan Agri emphasized its altruism in Madagascar, in providing new biotechnology and resolving food security problems, as well as increasing the incomes of local farmers. The company initially started by providing hybrid rice seeds to a small farming community 30 kilometers outside of Antananarivo through the demonstration center. It gave them fertilizer and other inputs, and provided them with training from Chinese technicians on close-planting and rice management techniques that could help boost their yields with their own rice varieties, as well as with hybrid rice.

The farmers were then allowed to keep the hybrid rice crop, to demonstrate their efficient yields. However, after the termination of the development project, and without the free seeds, the farming community near the demonstration center reverted back to growing local varieties of rice. Despite the development project's termination, Hunan Agri still holds its own training and demonstration programs in rice planting and cropping every year. It also produces manuals and other materials on hybrid rice for local farmers in the Malagasy language.

The company currently seeks to develop production beyond domestic needs to eventually export to neighboring Comoros and Mauritius. However, as they cannot legally own land under Malagasy law, the company—as with all foreign firms and agricultural investments in Madagascar—must use contract farming arrangements, with rice fields spread across the country beyond Antananarivo. With contract arrangements come compliance issues, and Hunan estimates that it has faced problems in getting back its crops with around 10 percent of the contracted farmers.

Many of the Chinese agricultural investments had some form of technical training program for local farmers: for both hybrid rice and the cassava planting projects, Hunan Agri employed ten Chinese technicians to oversee and advise local farmers in rice planting, and another four to supervise cassava, an endeavor of its subsidiary Chengsheng. The three cotton investments in Toliara—Chimad, MSG, and Tianli Agri—all have technical training programs and initiatives.

Tianli, for example, has 15 training centers run by Chinese technicians to instruct local farmers on cotton planting techniques, with ongoing support in the field. The director of Tianli explained how the technicians instruct farmers on "how to prune and trim the plants, when to plant, when to use the fertilizer." He described how the company originally acquired its farm from a French company, adding: "the French didn't teach the farmers how to be productive... France is an industrial, not an agricultural country!" The Chimad manager shared a similar story on the efficacy of the planting techniques introduced by the Chinese: "The farmers here didn't know how to grow cotton. Ashima [the previous company] didn't teach them, not even basic techniques." According to him, the farmers that followed the instructions doubled their harvests, although "some don't listen, and still follow their own ways."

Not all training center initiatives have been successful. A Chinese slaughterhouse in Toliara owned by a company named Hongtai, which claimed to be the only slaughterhouse operating with the approval of the environmental ministry, failed in the development of such a center. The manager explained how they agreed to a five-year contract with the Ministry of Livestock to construct a training center in Fianarantsoa for bovine and ovine husbandry, costing MGA 6 million (US$1.8 million). Their continued slaughterhouse operations were implicitly conditional on agreeing to this demand. However, the political reshuffle following the 2013 election and the appointment of a new minister sparked a conflict between the firm and the department, after which the project was scrapped, as detailed in the next section.

Seeds, Machinery, and Equipment

The entry of Chinese investors into the agricultural and industrial sector in Madagascar has generated visible benefits in terms of the technology and hardware entering the country. One of the largest businesses visited specialized in agricultural machinery, which is imported from China for domestic sale, primarily to Malagasy smallholders and family farms, but also to Chinese and European firms. Mr. Liu, the owner, commented that the products and brands were now "well-known in Madagascar for their cost, and for their quality." However, although these imports of inexpensive technology are arguably a boon for Malagasy agriculture—and are supported by government policies, which allow zero percent import tariffs on agricultural machinery—Mr. Liu argued that the main issue was not machinery, but the lack of high-yield grain seeds.

Additionally, the import of this equipment does not support the domestic production and manufacturing of such goods: "Chinese products are cheap and good quality," he commented, adding, "there is little potential in domestic manufacturing." Few Chinese firms mentioned having Malagasy competitors in their industry, aside from some Sino-Malagasy firms in the industrial free zones.

Chinese agricultural investments have also brought new biotechnology to Madagascar, including high-yield varieties of rice and cotton, which are particularly promising in a country that has suffered from low agricultural productivity. The manager of Hunan Agri explained that the growth of food production in the country was not keeping pace with population growth, explaining, "In the 1980s, Madagascar was a food exporter, but now it has a food deficit growing year to year. They need to increase food productivity, otherwise in five to ten years there could be potential conditions for a famine, just like in Somalia." Hunan Agri's hybrid rice had yields of around 7 or 8 tons per hectare, around three to four times the yields of domestic Malagasy varieties. A representative from the Ministry of Agriculture agreed that the Chinese hybrid seeds gave superior yields to domestic varieties, and farmers were very satisfied with them.

The rice was well-received from the farms that participated in the demonstration projects, and Mr. Zhou, one of the technicians at Hunan Agri, said that "after they saw the yields it could produce, everyone came to us asking for it [hybrid rice seeds]." Initial demand for the seeds outstripped the amount that Hunan could provide for free: "Some farmers wanted to plant their whole fields with it," said Mr. Zhou, "but we didn't have enough to supply with that much land. We can't just give it away to everyone for free."

Despite these benefits, none of the farmers we visited at the original demonstration center were growing hybrid rice. This was primarily due to distribution: local branches of the Ministry of Agriculture were responsible for distribution, not the company itself.[20] Many farmers also cited the high cost of hybrid seeds—US$4.00 per kilogram—as a barrier, especially since planting on one hectare would require around 1 to 2 kg of seeds. One of the primary challenges with hybrid seeds is that, since they are derived from two parent plants, they cannot be replicated. New seeds need to be repurchased from the company every year. Although the community surveyed did not grow hybrid rice, the variety has been successfully grown elsewhere on the island, and Hunan Agri has contract farming arrangements around the regions of Antananarivo, and Alaotra-Mangoro, to the east.

Clustering and Firm Linkages

One key mechanism discussed in the technology transfer literature is forward and backward linkages between foreign and domestic firms. These supply chain linkages can form a key channel for foreign firms to integrate and upgrade the technology and capacity of their suppliers, through enforcing higher standards for products, training, and direct provision of hardware. Our investigations of Chinese investments show some emerging supply chain linkages.

Tianli Agri is a key example of this phenomenon. The company began in Mauritius with cotton spinning and textiles, but its chairman sought to source its raw cotton directly, rather than by purchasing from third-parties. He chose neighboring Madagascar as an attractive investment given its favorable climate and environmental conditions. Tianli has created a nascent cotton supply chain between the cotton planted and processed in Madagascar and its spinning plants in Mauritius; the director estimates that some 30 to 40 percent of the Mauritian plant's cotton supply comes from Madagascar. This supply chain has also involved other Chinese and Indian cotton farms, since the production of cotton from Tianli's own contract farmers is still insufficient to meet downstream demand.

Another case that illustrates this phenomenon is that of FDC, which acts as a supplier to larger construction firms, including the Chinese firm SOGECOA. While the manufacturing and assembly took place in Madagascar, through local skills and labor, the suppliers and raw materials, such as aluminum and glass, all came from China. Ms. Liu of FDC commented that high quality glass requires very high temperatures to produce, which is impossible to do locally, due to the poor electricity supply in Madagascar.

Despite small and emerging clusters of Chinese firms in cotton processing and in window production, as well as some textile firms in the free zones, clustering at an industrial level has yet to emerge. Longfei Maloci, the cement-factory-cum-seafood-exporter was one firm that expressed an explicit plan to build such an industrial cluster. The owner's daughter, Ms. Li, outlined the company's designs for an industrial park centered on cement production and other construction materials. However, the plans for these have largely stalled due to bureaucratic and political difficulties associated with the development of new businesses.

One part of Maloci's plan was a factory for clinker, a key raw material used in cement production, currently imported from China. Other materials, such as gypsum, were domestically sourced, and the company had its own gypsum quarry in Madagascar. It also produced its own polystyrene boxes and materials for the seafood side of the business. The manager, Ms. Li, explained that having their own domestic source for clinker, on the cement side, would reduce its production costs and help it compete with imported cement. Currently, the company pays a 20 percent customs tax on clinker imports, and a 20 percent value added tax, for a total tax burden of 40 percent. This makes their domestically produced cement uncompetitive vis-à-vis imported cement. While having a clinker factory would resolve this problem, Ms. Li was resigned, stating: "you cannot have a timeline here in Madagascar."

Other export-oriented firms such as King Deer Cashmere employ a "both ends overseas" (*liangtouzaiwai*) export processing model that imports raw materials and exports finished products. The company's operations in Madagascar center on the low-cost labor resources and tax incentives offered by Madagascar's free zone policies.[21] While this business model provides local employment, it provides little incentive to build domestic supply chains or linkages. KDC is aware that firms like Tianli produce cotton directly in Madagascar, and said they would consider using cotton inputs from Tianli in their future production. But, on the whole, they had few professional relationships with other firms.

Interestingly, KDC is a member of the GEFP (Free Zone Association). Ms. Chan, the assistant general manager, is a third generation Sino-Malagasy, and has personal contacts with many other Free Zone textile firms. She acts as vice-president of the GEFP. She noted that a Pakistani firm called Cotton-Line (previously Cotona) hired 9,000 workers and had started vertically integrating to produce cotton for its own textiles needs, and was also expanding downstream to produce its own clothes. This example of backward and forward linkages shows promise for the future. As part of the GEFP, KDC and Ms. Chan have been active in lobbying the government for the extension of their tax-free privileges. This was under threat in 2008, when the IMF put pressure on the government to balance its budget. After the 2009 political crisis, they were able to convince the transitional government to maintain the existing Free Zone policies and protect their business interests. "This was one good thing to come out of the political crisis," Ms. Chan commented.

6. Challenges Facing Investors

Political Environment

Nearly every single firm we visited cited the lack of political stability as the greatest challenge to investing in Madagascar. Resigned to the lack of support from the Malagasy government, many investors expressed a desire to simply see less government interference in their businesses.

Most significantly, the impact of the political crisis in 2009 is still being felt. Some businesses that stayed, such as FDC, have been directly affected by the instability: its store in Antananarivo was looted by rioters during the crisis, and had to shut down for 15 days. However, FDC's Ms. Liu commented that "things stabilized quickly." She saw the crisis as a temporary issue. However, she also complained about the lack of security and support they receive from the government as foreigners, saying "we feel very powerless here…we have no help or aid."

The political environment after the 2009 crisis also increased costs for businesses navigating the bureaucratic process. For example, one company's manager complained about the arbitrary and often extortionary nature of regulatory laws that affect foreign businesses in Madagascar. "The government needs money," the manager explained, "people keep coming here [from the government] for any reason to ask for money." Operations have been affected by routine checks from government agents who fine foreign firms for "non-compliance," and by the government backtracking on granting residency permits. Because Chinese investors have problems communicating with the local population, most just pay the necessary fines. "If you do everything right, they still find a way to make you pay," the manager sighed.

The managers at MSG cotton in Toliara were similarly frustrated. Their corporate taxes were reportedly doubled from 21 percent to 42 percent in the span of a year, and they echoed the sentiment that the government seemed to come up with deliberate regulatory obstacles for foreign investors in order to extract taxes and fees, hidden costs they had not foreseen prior to investing. "They think you're a piece of meat," they said. The Hongtai slaughterhouse in Toliara has also been negatively affected by the political instability. As of August 2015, the abattoir lay vacant, and production had been on hold for eight months. According to the manager, this was due to a difficult political relationship with the Ministry of Livestock.

Despite a previously close relationship with the Ministry, involving the construction of a training center in Fiaranantsoa valued at MGA 6 million (around US$1.8 million) as an implicit condition for his business operation, the political reshuffle in 2013 meant that, "when the department head steps down, all agreements are off." When the new Minister approached the manager again, implicitly demanding more money, he refused to give in. Subsequently Hongtai and another slaughterhouse in Vontovorona were shut down, ostensibly due to the decision of the Ministry to suspend the slaughter of animals for export, but in what was widely perceived to be a form of retaliation. The manager described it as a "massive waste."

The suspension of the abattoir's business is also part of a wider controversy surrounding the impact of Chinese investments, and the supply chain impact of a significant increase in Chinese demand for meat. Slaughterhouses in Toliara buy cattle from local markets without establishing their own supply chains, and thus the provenance of these animals is often unclear. Although the manager of Hongtai was emphatic that the cattle he purchased had proper permits and health records, local people blamed a growing number of violent attacks comprising zebu cattle thefts and smuggling on Chinese demand for meat, fueling tensions towards foreign investors.

Labor Relations

Many Chinese firms face cross-cultural challenges with local workers. Complaints about local labor are common, mostly focusing on the low productivity of Malagasy hires relative to Chinese workers. Cross-cultural divisions and negative stereotypes are compounded by the language barrier. An attaché at the MOFCOM office in Madagascar commented that the Chinese Chamber of Commerce heads did not speak good English or French, making it an ineffective bridge for Sino-Malagasy relations. Language barriers were also an issue in instructing workers during technical training. The director of Chimad said about the workers at his processing plant, “sometimes they say they understand, but they don’t, and some keep forgetting. You have to train them every day, keep reminding them…you have to treat them like a father.”

Laws also specify long mandatory holidays for workers. Coupled with the seasonal nature of production cycles, this means that some firms such as KDC shut down production for multiple months per year. Many investors also complained to us about the frequent nature of labor strikes in the country.[22] The manager of SUCOMA blamed cultural attitudes and leftover labor laws inherited from the French colonial era for many problems: “there’s a hierarchy of needs,” he argued, “workers here want rights and entitlements, but you can’t do that when you can’t satisfy your basic economic needs.” According to the director, the university of Antananarivo, Air Madagascar (the national carrier), and the energy and water ministries all went on strike in the same year. The latter was to protest against government plans for a joint venture with an American firm, Symbio, and led to power cuts that impacted the operations of many firms.

Strong labor unions are also a problem for MSG cotton, which had to seek the Chinese embassy’s help in negotiating with a labor union representing the Malagasy construction workers who had built one of their processing plants. After the completion of the construction project, workers whose employment was being terminated demanded severance fees—to the astonishment of the firm managers.

SUCOMA, a Sichuan SOE producing cane sugar, came to exemplify the problematic labor relations of Chinese firms in Madagascar. In 2013, one of the company’s five sugar processing plants, based in Morondava, experienced continued problems with local workers and squatters using the plantation’s irrigation system. In December 2014, a workers’ strike escalated into a full riot, and protesters stormed the plant, blockading and looting it. The Chinese embassy intervened to evacuate 28 Chinese nationals to the capital, and the plant has remained closed since. Mr. Zhou of SUCOMA related that it was still struggling to gain compensation from the government for its losses from the damaged factory, which was unlikely, given the government’s current fiscal position.[23]

In the agricultural sector, Chinese investors were also experiencing a multitude of principal-agent problems with farmers under contract farming agreements. Due to legal restrictions on foreign land ownership, Chinese agricultural investments in cotton, cassava, and rice all employed local contract farmers who received inputs (fertilizer and pesticides) from the Chinese firm, and sold back the crop with the cost of these inputs deducted. Hunan Agri related that they had problems buying back their crop; after receiving inputs, seeds and machinery, the farmers refused to sell back the rice.

This problem was also prevalent in the cotton sector in Toliara, where the five cotton processing firms—three Chinese and two Indian—often bought their cotton from the same farmers. As such, contracting arrangements between firms sometimes overlapped or conflicted. Some farmers simply did not plant the cotton, instead using the provided fertilizer and inputs on other crops, or sold the fertilizer on the market when their crops failed. Others broke contracts by growing the cotton but selling it to rival competitors who offered higher prices.

For Tianli, the largest cotton producer of the five, this problem was particularly acute, and its manager confided that it had experienced non-compliance issues with around 70 percent of its contracted farmers. This created problems for its downstream cotton spinning company in Mauritius, and meant that it also ended up buying processed cotton from other firms in Toliara: “we have a whole production chain to supply,” said Mr. Zhang. Tianli has been trying to create an industry association for cotton investors to prevent mutual undercutting, and to better lobby the government to regulate and support their legal claims with the farmers. Such efforts have been successful in some other African countries.[24] However other cotton firms, such as Chimad, expressed little faith in these initiatives “if you want to be president, you have to take care of everyone’s problems...they’re the big boss here, but no one is happy.”

Economic Environment

The lack of adequate infrastructure represents an ongoing problem for many Chinese investors. Poor quality roads, urban infrastructure, and the lack of energy supply raise the costs of business and in turn the cost of production. This particularly impacts export-oriented firms. A KDC manager, whose second “going out” venture was in Cambodia, noted the difference in the transportation infrastructure between the two countries: “at our factory in Cambodia, we can ship from China in 15 days,” he said, “here, it takes us 45 days.”

Poor roads and urban infrastructure meant many Chinese firms preferred to locate by the Ivato international airport, forming a cluster of Chinese import-export businesses 20 kilometers outside of the city center. Longfei Maloci represents an example of this phenomenon, since its fresh seafood shipping business depends on well-timed flights. Most Chinese firms, including Hunan and SUCOMA, had their headquarters based near Ivato, effectively creating a Chinese enclave, with Chinese-owned supermarkets and hotels operating in the same area.

Electricity and power supply also represent a key infrastructural issue, and power cuts were regular occurrences—a problem compounded by the strike in early 2015 of the water and energy ministry staff. Many plants, including King Deer and FDC, had their own power generators, explaining that it would be impossible to function otherwise. This lack of consistent power also limited how much the firms could expand production within Madagascar.

Many Chinese investors also complained about the Malagasy financial infrastructure, which hampered their business and overseas operations, mainly due to problems of currency exchange and capital mobility. The chairman of Tianli Agri noted that it was slow and difficult to move money in and out of the country, due in part to currency controls on the Malagasy Ariary. The weak exchange rate was also a major problem, reducing the purchasing power of the ordinary Malagasy, while raising the cost of imports. This was problematic for manufacturing and assembly firms such as FDC, which relied on imported raw materials.

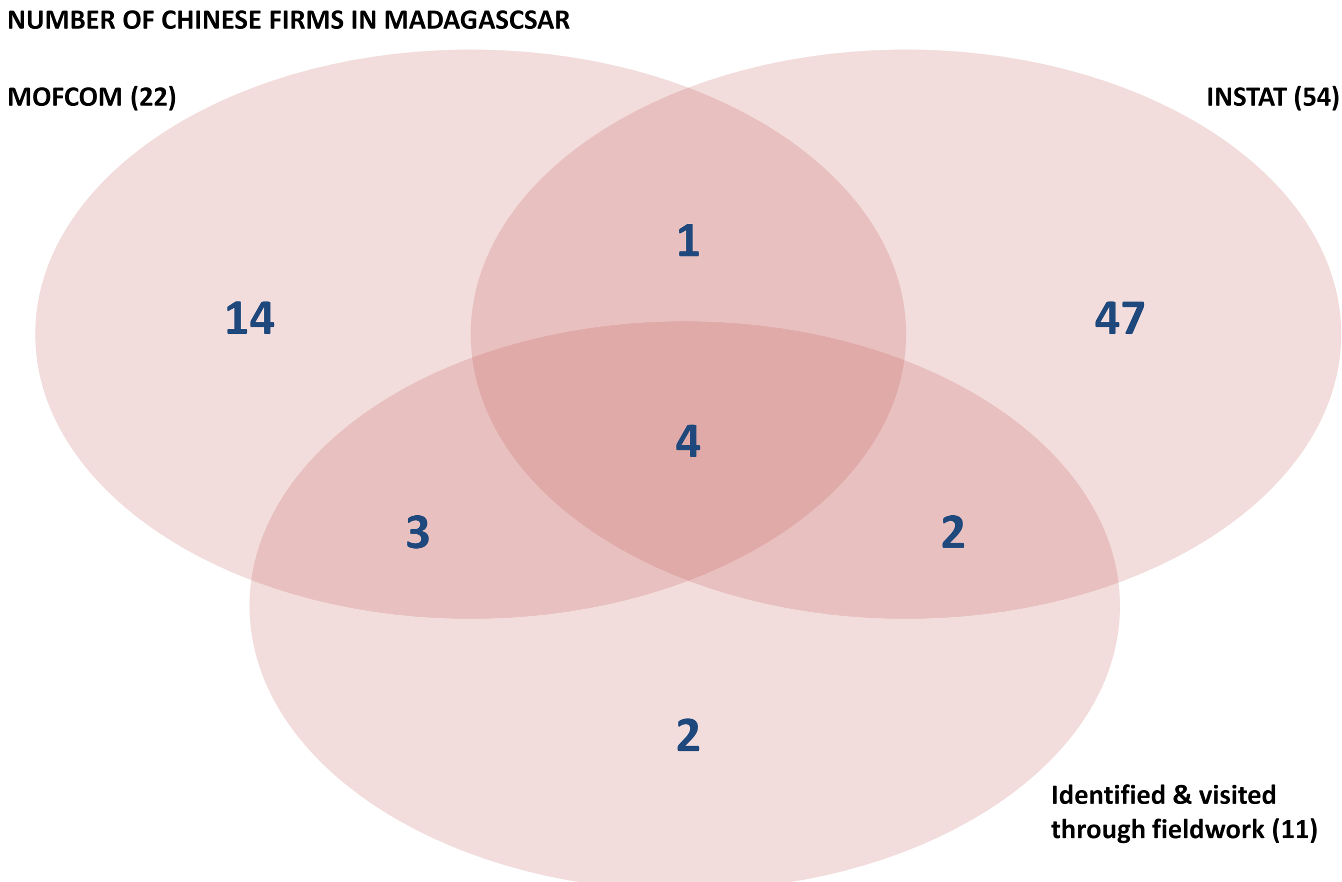
7. Conclusion

This project mapped some of the key Chinese investments currently taking place in Madagascar. We found emerging clusters of investment in the agriculture and manufacturing sectors, in addition to large-scale mining and construction projects. However, while contract farming investments, particularly in rice and cotton, have shown positive growth trends, the development of textiles and other manufacturing sectors has largely stalled. These trends are important to consider, as agriculture and light industry are key sectors in which technological transfers can occur, which in turn can facilitate wider structural change in an economy. Although we saw some evidence of positive skills and technology transfers, notably through agricultural training and the distribution of Chinese agricultural biotechnology and hardware, other key inter-firm channels of backward linkages were relatively absent. This is in part largely due to the small number of Chinese firms operating in the country, the low degree of industrial clustering that is occurring, and the lack of absorptive capacity in terms of domestic firms that might benefit from greater linkages with Chinese firms.

For almost all the Chinese firms we interviewed, the policy environment played a huge role in investment decisions. While many Chinese firms had longstanding ties to Madagascar, and therefore much experience dealing with its government, many of the Chinese executives we interviewed cited the political instability as the most important impediment to their activities in the country.

Madagascar possesses the factors of production to compete internationally in the agricultural and light manufacturing sectors, yet the string of ruling governments it has had in recent years has done little to foster growth. In fact, they have stifled foreign direct investment by generating red tape and bureaucratic hurdles, and the political instability they fomented ensured that foreign investors could not confidently expect sustained returns. The suspension of Madagascar's AGOA status between 2009 and 2014 led to a collapse and out-migration of foreign investment and many manufacturing firms. It is still early to say whether the reinstatement of AGOA status in 2014 will incentivize foreign investment to return. The Malagasy economy has still not fully recovered from the damage generated by the political crisis. Even after five years, the current government has not been able to generate an environment of policy stability in which investors can operate. In the words of one Chinese manager: "This country as a lot of potential, but only if the politics can work for growth."

Appendix 1. Matching analysis of agriculture and manufacturing firms from MOFCOM, INSTAT, and Fieldwork data



Appendix 2. MOFCOM list of Chinese firms in Madagascar

Registered Name in China (Translated)	Registered Name Overseas (Translated)	Province	Activities	Approval Date
Changle Lan Di Jewelry ltd. company	Suzannaha Company	Shandong	Jade, precious stones, processing and retail	6/8/2015
Guangdong HeLi Overseas ltd. company	Chimad Cotton	Guangdong	Cotton seed and agricultural products, processing and trading	6/2/2015
Beijing Jinhong (Golden Swan) development investment ltd. Company	China-Madagascar Resource Development ltd.	Beijing Municipality	Project investment, energy minerals investments, earth resources, agricultural investment, technology transfer	4/1/2015
Linyi city ZhengMao Leather hide ltd. company	ZhengMao (Madagascar) Trading ltd.	Shandong	Cow, sheep hide and leather processing	2/13/2015
China Global Fish and Seafood Products ltd. company	Madagascar Fishery	Central SOE	Fisheries and aquatics, processing, trading	11/15/2014
Guangdong HeLi overseas commerce ltd. Company	Best Agriculture Company	Guangdong	Cotton seed and agri products, processing and trading	10/15/2014
Hunan Chengsheng Ma Resources Investment ltd. company	Chengsheng Madagascar Agricultural Development ltd. Company	Hunan	Agricultural technology, trading, (products inc. peanuts, cassava) import of agricultural equipment, machinery, and fertiliser	1/6/2014
China Africa Agricultural Investment Yuan Shi ltd. Company	China Agricultural Development YuanShi (Madagascar) Agricultural Company ltd.	Central SOE	Agricultural development, rice paddies, rice, cassava, hemp, peanuts. Import of fertiliser, pesticides, other agricultural products. Retail and sales of agricultural products and international trade.	1/3/2014
Inner Mongolia King Deer Cashmere ltd. Company	Madagascar KDC Cashmere Products Company ltd.	Inner Mongolia	Wool cashmere products and processing	12/31/2013
Shanxi Tianli ltd. Company	Tianli Agriculture (Madagascar) ltd. Company	Shanxi	Farming and husbandry, breeding, processing, investment and trading	8/8/2013

Hunan Yuan Shi Hybrid Rice International Development Company	WeiChu (Madagascar) Agricultural Development ltd. Company	Hunan	Spreading hybrid rice technology	11/14/2012
Beijing Zhong Heng Yong Xin Technology ltd. company	Zhong Heng Yong Xin Madagascar ltd. Company	Beijing Municipality	Minerals investment and development	9/3/2012
Jinan Treasure Pavilion Commerce and Trading ltd. Company	Shandong Ivy Madagascar Commerce ltd. Company	Shandong	Minerals resource development, exploration, processing and retail, export of mineral productions, import and trade.	5/30/2012
China Golden Group Earth Resources Exploration ltd. Company	Madagascar Gold Ore Industry ltd. Company	Central SOE	Mineral products and exploration, refining of minerals and gold, export and trading	12/22/2011
China Aquaculture Head Office	Madagascar Fisheries company	Central SOE	Seafood and aquaculture, processing, trading	11/1/2010
Heilongjiang no.1 Earth Resources Exploration Office	Madagascar Longda Resources ltd. Company	Heilongjiang	Minerals exploration, processing, and sales	1/4/2010
Lianyungang Jinhua Rock Crystal Artisanal products ltd. Company	Madagascar Huafeng Rock Crystal Company	Jiangsu	Mining and processing of crystals and minerals	8/15/2008
China Complant Import-Export Group Head office (SUCOMA)	Complant Madagascar West Coast Sugar Industry ltd. Company	Central SOE	Sugar and alcohol manufacturing and sales	6/28/2008
Beijing He Yuan Mu Zhe Technology Development ltd. company development co.	MuZhe Technology ltd. Company	Beijing Municipality	Trading and export, electronics products and productions	8/16/2007
China overseas construction ltd. company (COVEC)	Madagascar Pharmaceuticals ltd. Company (Niphar)	Central SOE	Pharmaceuticals and production of medicines	7/25/2007
Tangshan Shuguang Group ltd. Co	China Shuguang Madagascar Longfei Cement ltd. Company (Maloci)	Hebei	Clinker mining and quarry, cement and clinker production and retail	12/13/2006
Wuxi Guangming Group Import-Export ltd. Company	Guangming (Madagascar) Clothing and Textiles ltd. Company	Jiangsu	Shirts and blouses manufacture and retail	6/16/2006

Appendix 3. INSTAT list of Chinese firms in Madagascar

Date of Creation	Company Name	District	Primary Activities	Value of Investment (MGA)[25]
8/12/2014	Lova Tsara Export	Ambatomirahavavy	Purchasing, processing and transforming raw zebu skins.	100,000
4/24/2013	Chensheng Madagascar Agricultural Development Co Ltd - Sarlu	Fitroafana	Agri-business: cultivating, exploiting, processing, and export, as well as research and development.	250,000
7/25/2012	Dragon Produits De La Mer Sarlu	Ampefiloha	Collection of seafood: collecting, processing, and preserving.	5,000
9/2/2010	Chimad Coton Sarl	Mitsinjo Betanimena	Collection of land, maritime, and river products.	50,000
9/19/2013	Hu Ping	Ankadifotsy	Retail trade of other food - soy.	10,000
8/3/2012	Commerciale De Developpement De Madagascar Sarlu	Soarano	Trade of agricultural raw materials and livestock.	15,000
6/6/2013	Fenwick Knitters Sa	Tanjombato Iraitsimivaky	Textiles: designing, creating, making, knitting, garment manufacturing, and other.	
3/17/2014	Me Garment Sarlu	Ambohijatovo	Manufacture of clothing and exports of finished products.	10,000
9/12/2012	Home & Decor Sarlu	Tanjombato Andafiatsimo	Linen clothing for export (and all related activities).	20,000
11/11/2013	Societe Bruyere Mada Sarl	Ambohimangakely	Manufacture of clothes and apparel.	50,000
9/23/2013	Societe I-Mar Mada	Ankadimbahoaka	Manufacture and export of apparel - textiles.	33,750,000
1/30/2007	Kwok Hing Garment Madagascar Sarl	6E Arrondissement	Manufacture of clothes and crafted garment intended for export.	500,000
6/27/2012	Kunming Taihang Corrosion Protect Engineering M/Car Sarl	67Ha Avaratra Andrefana	Consulting and engineering in the production of non-metallic materials engineering.	5,000
4/21/2006	Kam Hing Madagascar Sarl	Ivato Aeroport	Creation, operation, and marketing in the textile and clothing industry.	50,000

12/4/2014	Societe Jiade (Madagascar) Agricultural Investment Co.Ltd - Sarl	Mandrosoa Ivato	Cultivating, exploiting, processing, exports, and local sales, as well as research and development.	250,000
5/20/2008	Societe Weichu (Madagascar)	Tanambao V	Agricultural development.	50,000
1/16/2014	Zhongnongfa-Yuan'S (Madagascar) Agricultural Co., Ltd	Mandrosoa Ivato	Agricultural development, cultivating, processing, collecting, and sale and export of hybrid rice.	110,000
10/30/2013	Beef Of Madagascar Society Sarl	Antetezanafovoany I	Slaughterhouse operations: purchasing and slaughtering animals, prepararing, processing, and conserving.	50,000
3/13/1989	Somafa Sa	Tanjombato Andafiatsimo	Manufacturing and sale of building materials.	30,000
1/1/1963	Salone	Tanjombato Andafiatsimo	Making pasta.	1,050,000
2/12/2003	Madagascar King Deer Cashmere Co Ltd	Tanjombato Andafiatsimo	Industrial manufacturing (knitting) of apparel.	335,000
10/21/2010	Song Jing Sarlu	Ankadikely Ilafy	Industrial manufacturing of shoes.	50,000
9/18/2008	Weixin Sarlu	Behoririka	Industrial manufacturing of shoes.	25,000
5/19/2010	Weixin Sarlu	Behoririka	Industrial manufacturing of shoes.	25,000
6/24/2013	Fenosoa Company Ltd Sarlu	Ankadikely	Import and trade of raw material used in the manufacturing of shoes.	10,000
2/16/2015	Vy Madagascar Sarl	Morarano	Import, export, purchase, and sale of scrap metal, and processing scrap metal into finished products.	50,000
10/24/2014	Societe Or-Vert Sarl	Antsahatsiresy	Import of machinery, chemical products, construction materials, and electronics.	50,000
6/6/2014	Societe Fenosoa Company Coltd Sarlu	Behoririka	Import and trade of raw material used in the manufacturing of shoes.	10,000
4/15/2014	Profit Sarl	Behoririka	Import and trade of raw material used in the manufacturing of shoes.	10,000

2/17/2011	Societe Original Confection Mada Sarlu	Ankadimbahoaka	Import and trade of raw material used in the manufacturing of textiles.	5,000
7/23/2012	Liny Ao " Sarlu "	Antalamohitra	Import and trade of raw material used in the manufacturing of shoes.	10,000
8/26/2011	Speed Tana Center Sarlu	Andravoahangy	Importation and retail of building materials and sanitary products.	50,000
2/29/2012	He Jianhui	Ankirihiry	Import, processing, and sale of sheet metal.	200,000
2/24/2015	Haifu International Sarlu	Behoririka	Fishing, and processing of industrial and artisanal fisheries products for sale and export.	25,000
7/17/2014	Sino-Malagasy Plantation Transformation Export Sarl	Nanisana Iadiambola	Operating an industrial reforestation (eucalyptus and pine) plant.	50,000
12/13/2013	Madagascar Tobacco Group Sarlu	Andoharanofotsy	Planting, harvesting and curing of tobacco leaves.	5,000
11/26/2014	Madagrico Funong & Xingye Sarlu	Antanetibe	Planting, processing, and marketing of agricultural products - cloves, coffee, vanilla, beans.	10,000
8/14/2014	Habibo Industries Sarlu	Tanjombato Iraitsimivaky	Production, marketing, and export of wholesale, semi-wholesale and retail pasta.	10,000
12/1/1997	La Sucrerie De Complant De Madagascar	Analaiva	Sugar Production.	1,000,000
10/16/2014	Hermas Import And Export Sarlu	Behoririka	Production and projection of audio-visual goods.	15,000
10/30/2014	A Hai Import & Export Sarlu	Behoririka	Production and projection of audio-visual goods.	15,000
10/7/2008	Source Montagneuse De Madagascar Sarl	Itaosy	Prospecting, research, exploitation, production, and triage of minerals metals.	1,000,000
12/16/2010	Yuan'S Madagascar Agricultural Development Co.Ltd "Sarl "	Fitroafana	Research, importation, treatment, protection, and sale of hybrid rice seeds.	100,000
10/28/2013	Best Agri Sarl	Amboditsiry	Exploitating, harvesting, processing, and exporting cotton.	10,000

4/5/2012	Batt Sarl	Nanganehana	Production, recycling, and import and export of batteries, spare parts and derivative products.	100,000
7/16/2007	Sucrerie Cote Ouest De Complant De M/ Car - Sa	Mandriambero	Sugar plant and distillery.	1,000,000
5/20/2014	Fushang Real Estate Limited Co Ltd Sarlu	Behoririka	Trading, manufacturing, and sale and retail marketing of building materials.	5,000
9/20/2011	Societe Gelangshi Sarl	Ambohibao	Garment factory, and import of textile products - fabrics, accessories, novelties.	25,000
11/18/2014	Societe Usine De Transformation De Cuir De Madagascar	Ankirihiry	Leather processing plant.	500,000
7/14/2011	Potential Grow Investments Limited " Sarlu "	Ivato Firaisana	Industrial development zone hosting an industrial building, housing, and a warehouse.	50,000
2/4/2003	Kuang Qun Feng (Tometal)	Tsimialonjafy	Import of raw materials, electric appliances, and furniture, among others.	500,000
10/25/2012	Future Development Corporation Ltd Sarl	Mahazoarivo Avarabohitra	Carpentry in the sector of aluminum and stainless steel - mirrors, windows.	110
3/27/2006	Societe Future Developpement Corporation Limited	Ankirihiry	Carpentry in the sector of aluminum and stainless steel - glazing, mirrors.	550,000
12/23/1997	Future Development Corporation Limited	Andohatapenaka I	Carpentry in the sector of aluminum and stainless steel - glazing, mirrors, and printing.	110,000

Appendix 4. Firms visited during fieldwork

Name	Type	Location	Activities	Date of Interview
NIPHAR	Manufacturing	Antananarivo	Packaging and assembly of pharmaceutical products	8/7/2015
Hongyuan Machinery	Retail, Manufacturing	Antananarivo	Retail and assembly of automobiles and agricultural machinery	8/11/2015
Hunan Agri	Agriculture	Antananarivo	Hybrid Rice, cassava and other agricultural products	8/11/2015
Longfei Maloci	Manufacturing, Aquaculture	Antananarivo	Cementery and aquaculture	8/11/2015
Sucoma	Agriculture	Antananarivo and other locations	Sugar plantation and distillery	8/11/2015
Tianli Agri	Agriculture	Toliara	Cotton seeds and plantation, processing and sales	8/11/2015
King Deer	Manufacturing	Antananarivo	Knitwear and textiles products	8/12/2015
MSG	Agriculture	Toliara	cotton seeds and plantation, processing and sales	8/16/2015
Chimad	Agriculture	Toliara	Cotton seeds and plantation, processing and sales	8/16/2015
FDC	Manufacturing	Antananarivo, Toliara and other locations	Doors, windows, fenestration and interiors	8/17/2015
Hongtai	Agriculture	Toliara	Abattoir and meat processing, export and trade	8/17/2015

Endnotes

1. Solofo Randrianja, and Stephen Ellis, *Madagascar: A Short History* (Chicago: University of Chicago Press, 2009).
2. Ibid.
3. Live Yu-Sion, “Madagascar,” in Lynn Pan (ed.) The Encyclopedia of the Chinese Overseas Singapore (Archipelago Press, 1998): 347-350.
4. Ibid.
5. Cornelia Tremann, “Temporary Chinese Migration to Madagascar: Local Perceptions, Economic Impacts, and Human Capital Flows,” *African Review of Economics and Finance* 5, no. 1 (December 2013): 7-16.
6. Ibid.
7. Lauren Ploch, and Nicolas Cook, “Madagascar’s Political Crisis,” Congressional Research Service, June 12, 2012.
8. Jean Razafindravonona, Eric Jean Rakotomanana, and Jimmy Rajaobelina, “Impacts of Investment Relations Between China and Madagascar,” AERC, 2009, http://dspace.africaportal.org/jspui/bitstream/123456789/32410/1/Madagascar-Investment-paper.pdf.
9. Ibid.
10. Ibid.
11. World Bank Development Indicators, “Madagascar,” *The World Bank*, 2015, http://data.worldbank.org/country/madagascar.
12. FIAS, “SEZs - Performance, Lessons Learned and Implications for Zone Development.pdf,” World Bank, April 2008.
13. Republic of Mauritius, “Republic of Mauritius- Madagascar’s PM Seeks Mauritian Expertise to Set up Special Economic Zones,” News release, April 30, 2015, http://www.govmu.org/English/News/Pages/Madagascar%E2%80%99s-PM-seeks-Mauritian-expertise-to-set-up-special-economic-zones.aspx.
14. China Africa Society [中非社.], “Madagascar Market Access Provisions _ Policies and Regulations - Central Africa Club,” www.afbiz.info, http://www.afbiz.info/zixun/article1610.html.
15. Benefits include: tax exemption upon registration; exemption from professional taxes; 10 percent tax on dividends only; income tax exemption for first 5 years, then 10 percent after; exemption from customs duties and taxes on imported equipment; and free transfer of funds on termination (but must export 95 percent of goods).
16. “Madagascar | Trade At a Glance | Most Recent Value | WITS | Text,” World Integrated Trade Solution, 2014, http://wits.worldbank.org/CountrySnapshot/en/MDG/textview.
17. Bart Minten, and Christopher B. Barrett, “Agricultural Technology, Productivity, and Poverty in Madagascar,” *World Development* 36, no. 5 (May 2008): 797–822.

18. The hotel was built by Sogecoa at the request of the government, and funded by Chinese aid. It was converted to a hotel from the original 50 presidential palaces that the government requested for the conference for African heads of state.
19. The ATDC model was intended to promote technology transfer while also serving as a platform for the Chinese firms to seek commercial opportunities abroad. There were 25 ATDCs in Africa as of 2014. See: Deborah Brautigam, *Will Africa Feed China?* (New York: Oxford University Press, 2015).
20. The Malagasy Ministry of Agriculture (MOA) expressed a number of challenges with Hunan's hybrid seeds: an initial 300 ton gift of seeds had to be quarantined and returned when it showed a foreign spore, although the company contended that by Chinese standards this was harmless. Despite expressing interest in selling seeds as 2007, it was not until 2014 that Hunan Agri finally got MOA to certify its seed for use in Madagascar. The company was then able to import 100 tons of seeds for distribution.
21. This includes exemptions on import tax and duties, refunds on value added tax paid, and reduced rates of tax on profits (Zone Franche).
22. The law mandates holidays due to harvest cycles. The KDC factory noted that they could run production for much longer in the other countries in which they were based. KDC explained their production cycle was around 7-8 months, with about a three-month holiday, but this would be due to the nature of their production seasons as well (orders were generally from a single purchaser), and not just due to holidays.
23. For more on this case, see Brautigam, *Will China Feed Africa?* (2015).
24. Xiaoyang Tang, "The Impact of Asian Investment on Africa's Textile Industries," Carnegie–Tsinghua: Center for Global Policy, 2014, http://carnegieendowment.org/files/china_textile_investment.pdf.
25. A staff member at INSTAT indicated that these figures might be low because (1) the firms might have under-declared the size of their investments or (2) they might not have understood that the government wanted to receive the figures in Ariary as part of the survey through which this data was collected.

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