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Chinese Manufacturing and Agricultural Investment in Tanzania: A Scoping Study

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ABSTRACT

**SAIS-CARI WORKING PAPER
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“Chinese Manufacturing and
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THIS PAPER USES EMPIRICAL EVIDENCE from the field to examine Chinese manufacturing and agricultural investments in Tanzania. Investigating Chinese investments in the manufacturing and agro-processing industries in Tanzania we found that most investments in these two sectors have been driven by the potential of African markets and access to raw materials and cheap labor, rather than financial incentives provided by the Chinese government. Since the 2000s, China-Tanzania trade relations have witnessed steady growth. In 2015, World Bank data placed China among the top five destinations for Tanzanian exports, accounting for nearly ten percent of total exports, while China was also the second largest source for Tanzanian imports. We found that although Chinese investments in Tanzania arrived later than many other foreign investments, they have already created various linkages with the local economy, facilitating knowledge transfer through developing local supply networks, providing training opportunities in collaboration with government and vocational training institutions, engaging in technological and financial cooperation with local firms, and contributing to setting local standards. Most of these linkages depend on personal networks; in other words, they are neither consistent nor coordinated. Tanzania offers security, political stability, and a relatively large domestic market to attract foreign investment. At the same time, there are notable economic and political constraints that continue to hamper the economic growth and investor confidence in the country, including poor infrastructure and energy supply, underdeveloped local supply chains, regulatory uncertainty, and cultural differences.

INTRODUCTION

SINCE THE ANNOUNCEMENT OF THE “GOING-OUT” STRATEGY in the early 2000s, an increasing number of Chinese investors of various origins, sizes, and ownership structures have been drawn to Africa by different motivations. Some were driven by the increasingly competitive environment in China and the need to reallocate capacity surplus overseas, while others were attracted by the market and growth potentials of African countries or were taking advantage of different kinds of government-provided incentives. Tanzania’s economic linkages with China were once the most extensive in Africa, illustrated by the construction of the TAZARA Railway. While the political and economic environments in both countries have changed dramatically over the years, Tanzania remains China’s largest aid recipient in Africa and remains among the top five African countries with the most favorable views of China, according to a poll conducted by a US think tank.¹ In 2015, Tanzania was selected as one of four pilot countries to showcase China-Africa capacity cooperation.²

This paper uses empirical evidence from the field to examine Chinese manufacturing and agricultural investments in Tanzania. The paper first provides an overview of the history of industrialization and foreign investment in Tanzania and of China-Tanzania relations, followed by the methodology used in this paper. It goes on to look at the sub-sectoral distribution of active Chinese manufacturing and agro-processing investments in Tanzania and discusses the linkages between Chinese investments and the local economy. The paper concludes by pointing out challenges as perceived by Chinese investors for doing business in Tanzania.

BACKGROUND

THE HISTORY OF (NON-)INDUSTRIALIZATION IN TANZANIA

TANZANIA HAS BEEN RECOGNIZED AS UNIQUE AMONG African countries for its political stability and the absence of religious or ethnic conflicts. This can be attributed, at least partially, to nation building efforts undertaken during Nyerere’s presidency in the early, post-independence period with efforts that included the promotion of Swahili as the national language and improvements to education in rural Tanzania.³ In addition, the dominant political party, Chama Cha Mapinduzi (CCM), has been in power since Tanzania’s independence in 1977, making it the longest ruling party in Africa.⁴ Despite this stable political environment, Tanzania is among the least developed countries in the world. In 2016, Tanzania’s gross national income (GNI) was US\$ 900 per capita and its gross domestic product (GDP) was US\$ 47 billion, which is much lower compared to neighboring Kenya that had a GNI of US\$ 1,380 per capita and GDP of US\$ 71 billion.⁵

Having suffered from serious economic troubles in the late 1970s and early 1980s, Tanzania negotiated a series of structural adjustment programs with international donors including the World Bank and the International Monetary Fund. These programs aimed to liberalize the trade and pricing system as well as privatize parastatals in the 1990s and 2000s. World Bank data suggests Tanzania’s annual GDP

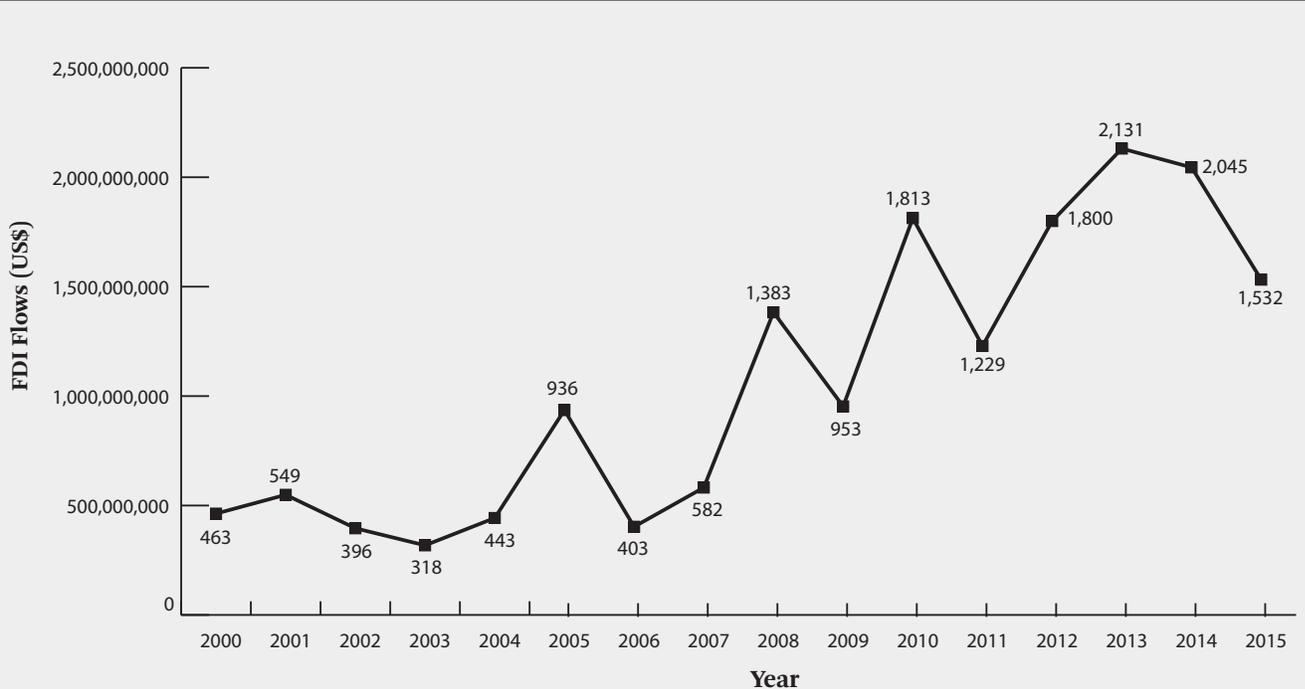
growth has averaged six percent since 2000.⁶ But these reforms were also accompanied by increased levels of corruption, tax evasion, and a decline in public service provision.⁷ There have been both positive and negative impacts of liberalization. On the one hand, the manufacturing sector took a serious hit from liberalized trade since they were unable to compete with international productivity and efficiency levels.⁸ On the other hand, the external environment has improved for Tanzania as demand from emerging markets in Asia, especially China, has increased dramatically.⁹

TANZANIA'S INVESTMENT CLIMATE

OVERALL, TANZANIA'S INVESTMENT CLIMATE HAS BEEN IMPROVING over the past thirty years. The government has adopted reforms to establish an enabling business environment and to promote foreign investment. The Tanzania Investment Center (TIC) provides fiscal incentives such as value-added tax exemptions on project capital and an import duty rebate scheme, as well as non-fiscal incentives like foreign employment quotas and profit remittance for qualifying investors. However, concerns including policy uncertainties, implementation gaps, skilled labor shortage, and expropriation risks still restrain investors' enthusiasm in Tanzania. Nationalization, in particular, is also a serious concern. Tanzanian law requires investments in telecommunication and mining sectors to have a certain percentage of local ownership, but it is unclear when enforcement is going to take place and how.¹⁰

As Figure 1 shows, Tanzania's official statistics suggest a steady growth in foreign direct investment (FDI) inflows since the 2000s, although there are considerable

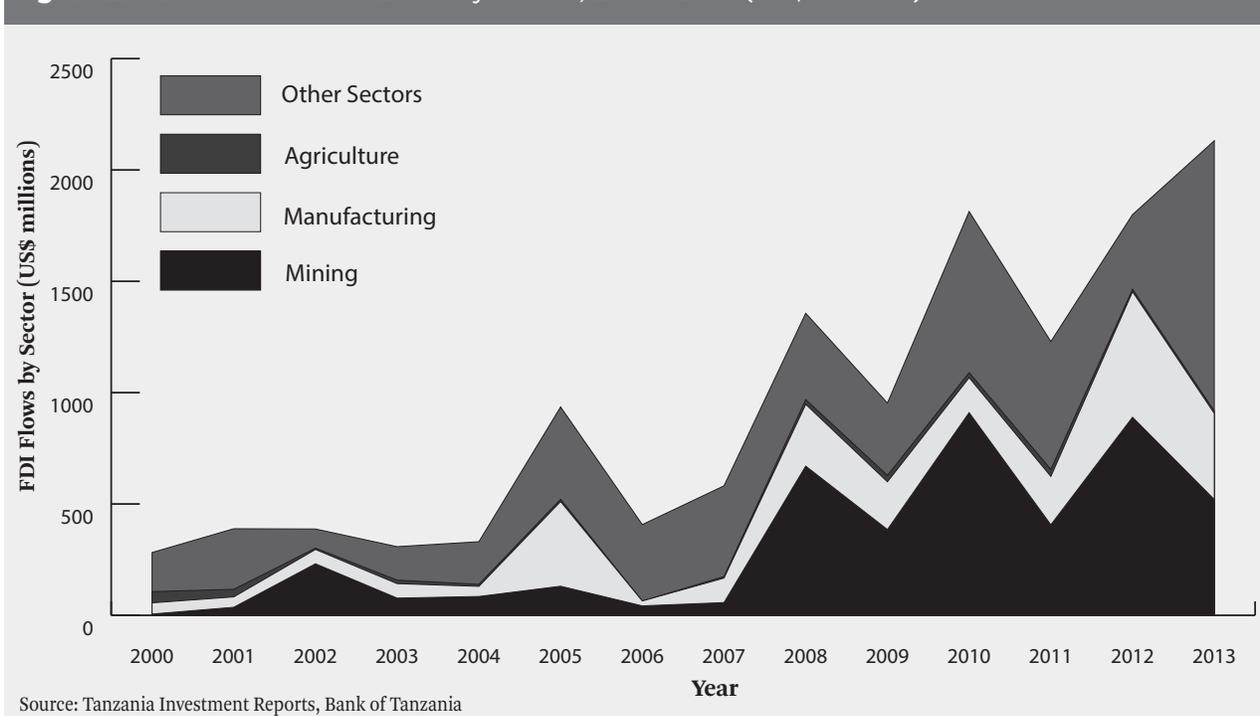
Figure 1: Annual FDI Flows to Tanzania (US\$ millions)



Source: UNCTAD and World Bank

year-to-year variations. Figure 2 demonstrates FDI inflows broken down by sector.¹¹ Mining receives the largest sum of foreign investment, followed by manufacturing. In comparison, the agricultural industry, which contributed to over a quarter of Tanzania's GDP in 2014 and employs 80 percent of the labor force, received only minimal foreign investment in recent years.¹² By the end of 2013, FDI in mining and quarrying amounted to US\$ 6.825 billion or 45.9 percent of Tanzania's total FDI stock, while manufacturing saw a US\$ 2.41 billion (16.2 percent) investment and agriculture a US\$ 307 million (2.1 percent).¹³ Although the government has adopted several national strategies to prioritize agricultural development, including a 100 percent capital expenditure deduction, many foreign investors consider agricultural investment too risky because it takes longer to recover the investment and there are uncertainties in terms of weather conditions and local community relations.¹⁴

Figure 2: FDI Inflows to Tanzania by Sector, 2000-2013 (US\$ millions)



Since 2015, more investors have expressed concerns about increasing policy uncertainties under the new administration. These changes include more restrictive immigration policies, tax enforcement, and government delays on the implementation of a number of large-scale government contracts and investment projects.¹⁵ Investor anxieties led to a 25 percent decrease in FDI inflows, falling from US\$ 2 billion in 2014 to US\$ 1.5 billion in 2015 (Figure 1).

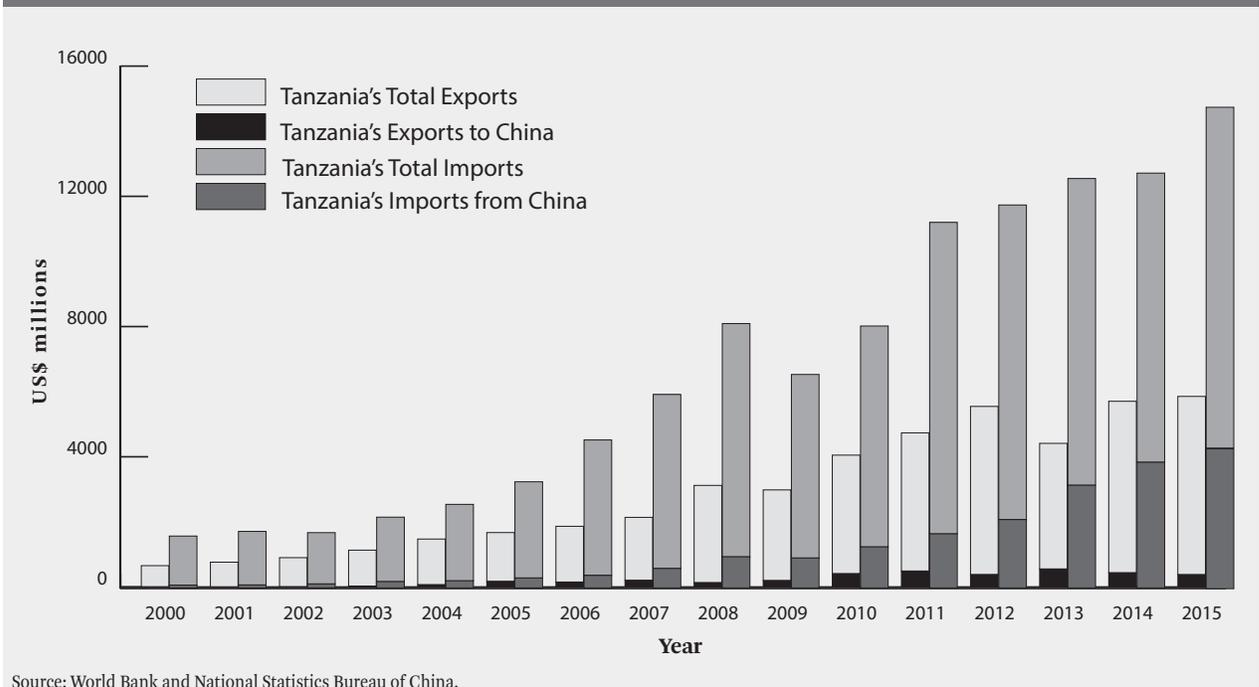
TANZANIA AND CHINA BILATERAL RELATIONS

THE DIPLOMATIC RELATIONSHIP BETWEEN TANZANIA AND CHINA was established on December 9, 1961, the same day Tanganyika declared independence. Friendship

between the two countries was ensured by a similar emphasis on self-reliance and economic transformation through socialist development policy ideologies, as well as diplomatic pressures. In the late 1960s, Tanzania went in search for alternative sources of funding when its relationship with major western donors soured because of ideological differences, while China's dependence on African allies to break out of the international isolation heightened after parting ways with the Soviet Union.¹⁶ Through the TAZARA Railway construction, along with other loans and technical assistance programs, China emerged as one of the top contributors of development assistance to Tanzania. To date, Tanzania remains China's largest aid recipient in Africa.¹⁷

Since the 2000s, China-Tanzania trade relations have witnessed steady growth. In 2015, World Bank data placed China among the top five destinations for Tanzanian exports, accounting for nearly ten percent of total exports; China was also the second largest source for Tanzanian imports, accounting for 12.61 percent.¹⁸ A large portion of Tanzanian exports to China are raw materials and agricultural products, while more than half of its imports from China are made up by machinery, electronics, and capital goods. Chinese official statistics (Figure 3) show China's share in Tanzanian trade flows to be even higher, accounting for almost 30 percent, or US\$ 4.279 billion out of US\$ 14.706 billion. While the discrepancy in FDI data is considerable (see Table 1), it should also be noted that a lack of consistent reporting methodology and statistical coordination among different authorities affects data credibility in both China and Tanzania.¹⁹ For example, information collected from TIC shows 670 Chinese firms registered as of May 2017, with total *committed* investment reaching US\$ 5.8 billion, whereas Chinese official statistics showed that China's FDI stock in Tanzania was only US\$ 1.138 billion by the end of 2015.²⁰

Figure 3: Tanzania's Imports from and Exports to China vs. Total Import and Exports (US\$)



METHODOLOGY

WE FIRST EXAMINED OFFICIAL BUSINESS REGISTRATIONS in China and Tanzania. Chinese companies planning to invest abroad are required to register with the Ministry of Commerce of China (MOFCOM). By the end of 2015, 140 Chinese companies had registered 159 investment projects destined for Tanzania. Using ISIC Rev 4 standards and definitions, we coded 49 of these 140 projects as manufacturing and/or agricultural investments based on their self-reported business scope. However, the discrepancy between official data in the two countries is significant. The TIC has recorded a much larger number of Chinese investments in Tanzania. By mid 2017, 670 investments were registered with TIC by Chinese investors, and 471 of them seem to be engaging in manufacturing and agricultural activities.

We went through the local yellow pages to find contacts for existing Chinese investments. We also referred to previous SAIS-CARI research in Tanzania, which was done in 2014 and provided a valuable base for understanding change and development in recent years.²¹ During the field study, we visited China's Economic Consulate in Tanzania, TIC, Tanzania's Bureau of Statistics, and several business associations serving Chinese expatriate entrepreneurs. It is through these agencies that we were connected to many Chinese managers and business owners. We also attended two public events concerning Chinese investments in Tanzania. One was a job fair organized by the Chinese Embassy, hosting more than 30 Chinese companies and hundreds of university graduates in Tanzania. The second was Tanzania's international trade fair, the Saba Saba Exhibition, which takes place every year during a Tanzanian public holiday. We met several Chinese companies participating in the exhibition, most of which were new entrants trying to break into the Tanzanian market.

Table 1: Chinese FDI Inflows to Tanzania 2002-2015 (in US\$ millions)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Chinese Official Data	-	-	2	1	13	-4	18	22	26	53	120	151	167	226
Tanzania Official Data	9	10	6	10	9	1	-	-	1	6	3	3	-	-

Source: National Statistics Bureau of China and UNCTAD (based on Tanzania official statistics).

We conducted 51 interviews, from which we were able to confirm 50 Chinese firms have invested in 70 agriculture and manufacturing projects in Tanzania. Most manufacturing projects are located in Dar es Salaam and neighboring areas, while agricultural investments in farming, timber processing, butchery, spinning, and other agro-processing activities are more dispersed geographically, scattered among rural Morogoro, Mwanza, Dodoma, and Iringa. We were able to verify 27 projects from MOFCOM's registrations, although only 12 are still in operation. Ten of them either never materialized or only engage in import and export business, and the other five

Table 2: Field Data on Sub-Sectoral Distribution of Chinese Manufacturing and Agricultural Investments

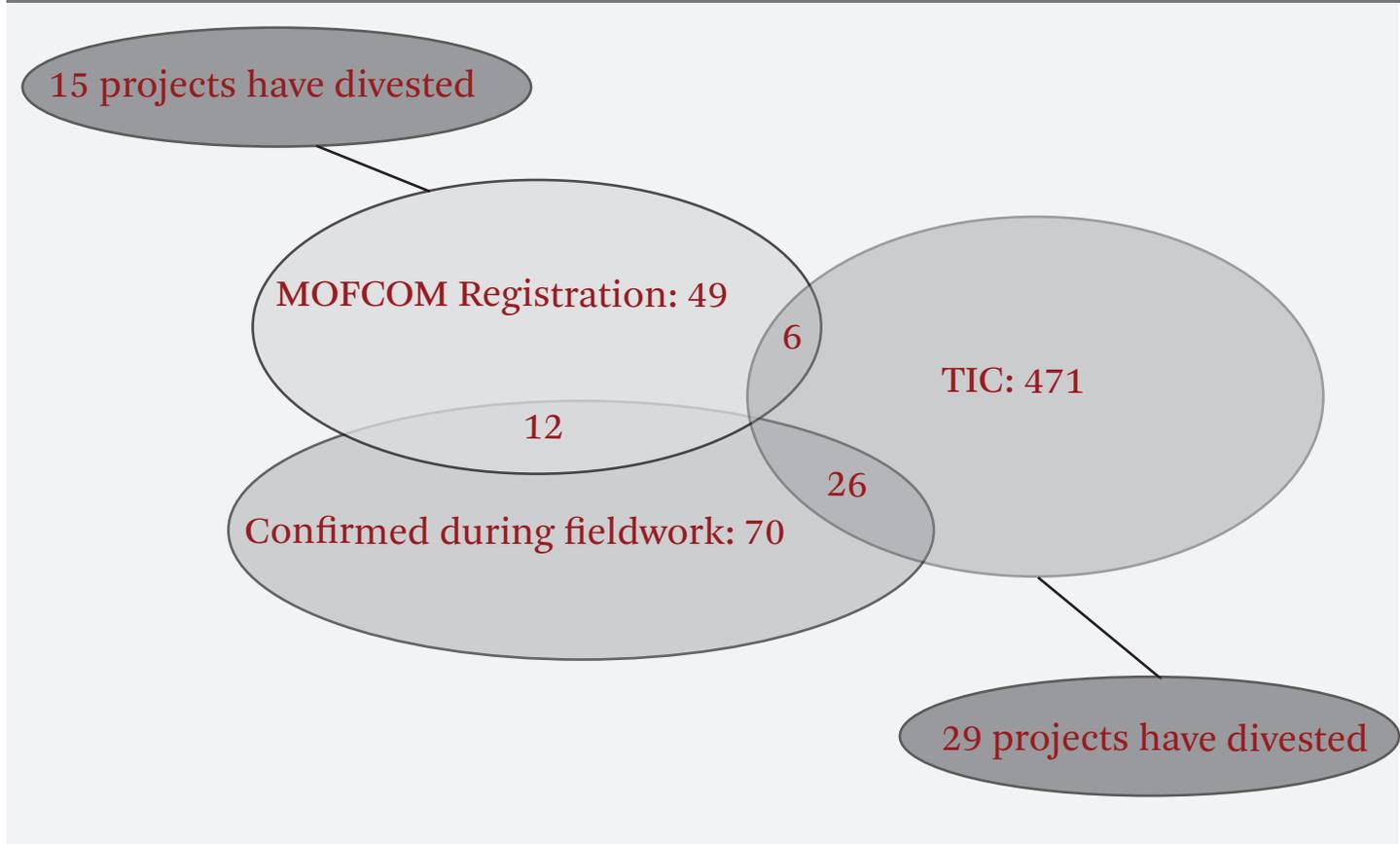
Sub-Sector	Number of Investment Projects	Main Products
Building materials	15	Ceramic tiles, gypsum board, plywood board, building glass
Smelting and Metal Recycling	6	Steel and aluminum bars, copper wire
Plastic recycling and processing	12	Plastic footwear, plastic shopping bags, plastic granules and flakes
Agro-business	7	Sunflower seed oil, sisal, cashew nuts, cotton yarn
Textiles and Garments	2	<i>Kanga</i> and jeans

companies have already divested their investment. For the 471 TIC-registered manufacturing and agriculture projects, only 15 match MOFCOM registrations. Of those 15, only six are still in operation. Among TIC registrations, we verified that 26 Chinese investments are still active, while at least 29 investments never materialized or are merely engaging in import and export activities, and nine have divested from their registered projects. In other words, less than one fourth of our interviewees were registered with MOFCOM, and only half of them were registered with TIC.

There are several reasons for this incredible discrepancy. First of all, there are many projects registered as manufacturing that are simply engaging in trade. Since many African host countries, including Tanzania, encourage foreign investments in local production, investors tend to “overstate” the size of their investment, number of jobs created, and local content (for example, plans for local manufacturing), hoping to facilitate government approval procedures. Secondly, registrations in both countries are not up to date. In a frequently changing business environment, very few companies bother to modify their registrations. For example, Xinghua Tannery, when interviewed in 2014 by a SAIS-CARI team, said they were planning to expand production and buy land to set up a ranch to raise cattle. During our visit in 2017, we were told that the tannery had closed operations in 2015 because its buyers in China, leather factories in Shandong and Hebei, were shut down by the Chinese government for environmental violations. Regardless, Xinghua Tannery is still listed in both China and Tanzania’s official registrations. Third, due to ownership changes, tax evasion purposes, and other reasons, changing a companies’ name is a common and frequent occurrence. The constant rotation of entities’ names makes it even more difficult for government authorities to keep track of the investment process. Finally, MOFCOM registration is only required for companies that need to obtain a foreign exchange certificate from China’s State Administration of Foreign Exchange to transfer their capital abroad. The nuance here is that in practice, many projects are set up by Chinese expatriates who have been in African countries for several years and have accumulated their capital

outside of China. Very few of these expatriate projects would appear in MOFCOM registrations, making them “invisible” to the supervision of the Chinese government.

Figure 4: Analysis of Agriculture and Manufacturing Firms from MOFCOM, TIC, and Fieldwork Data



FINDINGS **SUB-SECTORAL DISTRIBUTION OF CHINESE INVESTMENTS**

WE FOUND SEVERAL DOZEN CHINESE INVESTMENTS in the manufacturing of building materials. There was also a cluster of small Chinese-owned factories in plastic recycling and reprocessing; some recyclers exported waste plastic to China for further processing, while others produced packaging materials or other household plastic items for the local market.²² There were several investments in farming and agro-processing, as well. Most of the agricultural companies exported their products to China, with the exception of sunflower oil production and rice milling, which were aimed at local and regional markets. We also identified three investment projects in the textile and garment industries.

BUILDING MATERIALS MANUFACTURING

A NUMBER OF MANUFACTURING INVESTMENTS ARE CONCENTRATED in the building material sub-sector, demonstrating investors’ confidence in the market’s

Although the government has adopted several national strategies to prioritize agricultural development, including a 100 percent capital expenditure deduction, many foreign investors consider agricultural investment too risky because it takes longer to recover the investment and there are uncertainties in terms of weather conditions and local community relations.

growth potential. Several large investments were started in the past two years. Two ceramics factories, Twyford and Goodwill, are currently under construction, each featuring over US\$ 50 million in investment. Goodwill began production in April 2017, and Twyford followed suit six-months later. Twyford is a joint venture between Sunda International, a private Chinese company with extensive trade experience in several African countries including Tanzania, Kenya, and Ghana, and Keda, which is a Shanghai stock exchange listed machinery manufacturer. Goodwill is owned by a group of private investors from Wenzhou, a city famous for its private entrepreneurship. Upon completion, each factory will have a daily capacity to produce over 50,000 square meters of tile and create more than 500 local jobs. Twyford owns two other ceramics factories in Ghana and Kenya, while Goodwill completed its first plant in Nigeria and is planning to build additional factories in Ghana, Uganda, and possibly Kenya. Local ceramics production was almost non-existent in many of these countries before the entrance of Twyford and Goodwill. It will be interesting to see how these two Chinese companies will shape production and competition in the African ceramics industry. In addition to these ceramics' ventures, we learned about two companies interested in cement production. *Xinhua* reported that SinoMaterials (Sinoma) and Hengya Cement were planning to co-invest to set up a cement factory in Tanzania.²³ However, as of January 2018, construction on the project had not yet begun, likely due to the administrative review and approval procedures in China.²⁴

Chinese firms have also invested in producing tempered glass, aluminum doors and windows, marble floors, gypsum board, plywood, and paint. Most factories employ 50 to 100 local workers and have been in Tanzania for five years or longer. Observing a thriving infrastructure sector in Tanzania, Sunshine Group invested in a gypsum board factory in 2012, with a yearly production capacity of 3 million square meters. The company is currently in negotiations with Beixin Materials, a central Chinese state-owned enterprise (SOE), to expand the factory's production capacity. There are three or four other smaller gypsum board factories owned by Chinese investors as well. In addition, several Chinese companies have invested in plywood processing in Malinga and Iringa, where eucalyptus trees are abundant. The largest is Hongwei International, which invested nearly US\$ 5 million and employs 150 local workers. CADASP, a migrant entrepreneur-owned firm, has been importing glass sheets to produce tempered and laminated glass and assembling aluminum doors and windows since 2003. CADASP started as a subcontractor for large Chinese construction projects but developed a number of its own local clients. Since 2014, China Glass Holdings has reportedly been planning to establish a factory producing original glass films, but after three years the project has yet to materialize due to concerns over inadequate market demand and underdeveloped infrastructure such as power supply.²⁵ There are also several investment projects producing paint and marble floors, most of which are small side projects employing 20 to 30 workers. For example, Ocean Kiss owns a paint plant in addition to its primary investment in industrial oxygen and foam mattress manufacturing, and Wen Xing Plastics, which has been recycling waste plastics and

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producing woven sacks in Dar es Salaam since 2014, just opened a third plant making master batch, used for coloring plastics, to fill the gap in local supply.

SMELTING AND METAL PRODUCTION

THERE ARE SEVERAL COMPANIES THAT ENGAGE IN SMELTING and metal production, with varying degrees of local processing. Some are doing simple molding and assembly. For example, Zhu established T-Better steel factory in 2003, with an initial investment of about US\$ 1 million. T-Better imports steel rods and sheets from China and molds tubes in Tanzania with 60 local employees. There are several factories that recycle scrap metal and produce steel bars that can be used in the construction of residential houses. Founded in 2010, Hongyu Steel currently produces steel bars and wire rods. The two production lines cost over US\$ 15 million and employ 200 workers. Most of Hongyu Steel's clients are small local construction companies.

Two more recent investments in iron smelting and aluminum production are even larger than steel recycling projects. Kiluwa Steel was registered in 2015 and commenced operations in May 2017, producing steel bars with billets imported from China. Kiluwa uses boilers and machines that are more advanced than Hongyu, and the steel bars it produces are of higher quality and suitable for use in high-rise buildings. Another Chinese company has recently built a factory to produce cable and related products with copper rods imported from Zambia. The parent company has years of experience producing cable products in China; their plans include four manufacturing plants in sub-Saharan Africa, including one in Tanzania. Initial investment for the Tanzanian plant amounted to US\$ 5 million and the company is now the largest copper cable producer in Tanzania.²⁶ However, not all companies have been as successful. Hongda Steel, a project that captures a good deal of media attention, has made little progress since the signing of the memorandum of understanding with the Tanzanian government in 2006. The Chinese investor promised to invest US\$ 3 billion to develop iron mining and smelting in Tanzania, but due to disagreements on infrastructure construction, technical challenges, and the Chinese investor's financial difficulties, construction of the project has not yet started.²⁷

PLASTIC RECYCLING AND PROCESSING

WITH THE POTENTIAL TO DEVELOP INTO AN INDUSTRIAL CLUSTER, we found a number of Chinese investors in the plastics industry. About half a dozen investors are recycling polyethylene terephthalate (PET) materials, or spring water bottles, and exporting PET flakes to China for reprocessing. Their clients are mainly polyester fiber factories. In addition, about 50 companies are producing granules, plastic carrier bags, woven sacks, and household items such as plastic pipes and buckets, using recycled polypropylene (PP) and polyethylene (PE) materials.²⁸ On average, a plastic recycling factory hires between 50 to 100 workers. Investments typically range from US\$ 500,000 to US\$ 1 million and all products are sold on the local market. For example, Wen Xing

Plastics has three plants producing shopping bags, woven sacks, and plastic plumbing pipes. Although it was closed down in 2017 after the Chinese government announced a ban on imports of unprocessed waste plastics, Wex Xing also used to have a PET recycling plant. A third group of Chinese investors in the plastic industry are making ethylene vinyl acetate (EVA) and polyvinyl chloride (PVC) footwear. All of them import raw materials from Saudi Arabia, China, and Korea. Plastic slipper factories normally employ 100 to 200 local workers and cost about US\$ 1 million, although the larger ones can employ up to 500 local workers and have invested over US\$ 10 million.²⁹ Most investors in the plastic industry come from Zhejiang and Fujian Provinces and were involved in related business in China before coming to Africa. The earliest of them having arrived in 2008 or 2009, the first set of investors were followed by their business partners, employees, relatives, and friends. Competition is fierce among Chinese investors in the plastic industry.

AGRO-BUSINESS

AGRO-BUSINESS IS ANOTHER SECTOR THAT HAS ATTRACTED Chinese investors in recent years. Sunshine Group has invested in several plants processing cashew nuts, raw cotton, sunflower seed, and rice. The first two products are primarily aimed at the Chinese market, while sunflower seed oil and milled rice are sold locally. Jiangsu Dahong Textile began construction of an agricultural industrial park in Shinyanga in Northern Tanzania in 2010. The park was taken over by Jiangsu Overseas Corporation (JOC), an SOE from Jiangsu, which now operates a spinning plant and plans to establish a cotton plantation. Jie Long Holdings, a sunflower oil producer, also resides in the industrial park. Both companies are certified by the Tanzanian government as export processing companies, meaning that they are required to export at least 80 percent of their products. A third firm was said to be running a factory producing animal feed in the industrial park. China-Africa Agriculture Investment Co., a joint venture between China Nongken Corporation and China-Africa Development Fund (CADFund), owns a sisal farm in Morogoro, which has been planting and processing sisal fiber for export since 2000. Yet another investment agreement was signed between Epoch Group, a mining company owned by Chinese expatriates, and the Tanzanian government to develop maize plantations through contract farming and several processing plants. By mid-2017, the CEO of Epoch Group claimed to have spent US\$ 50 million on market surveys and land acquisition but she didn't disclose information regarding the status of the project's construction.³⁰

TEXTILE AND GARMENTS

THERE ARE TWO CHINESE INVESTMENTS IN THE TEXTILE and garments industries. China-Tanzania Friendship Textile Corporation (Urafiki) is a former aid project built by China in the 1960s which has been managed and operated as a parastatal by the Tanzanian government since it took over the factory in the early 1970s. Although

Although the significance of diplomatic relations between China and Tanzania has been reiterated in official rhetoric, it is private investors primarily driven by market factors who dominate Chinese manufacturing and agricultural investments in Tanzania.

inconsistent, China has continued to provide technological support to Urafiki. In 1994, China undertook another aid project to upgrade Urafiki's machines and equipment at the request of the Tanzanian government. Changzhou Textile Industry Bureau, from Jiangsu Province, was assigned to take charge of this upgrading project. In 1996, the decision was made between the two governments that Changzhou Textile would take an equity interest in Urafiki in order to keep the latter afloat. Changzhou Textile took a 51 percent share of the ownership, calculated based on the concessional loans China had provided Tanzania in the 1960s. In addition, China's EximBank provided another 200 million Chinese yuan in concessional loans to upgrade machinery. Since its establishment, the joint venture has employed 1,200 to 1,300 workers. It procures cotton from local farmers and produces *khangas*, the traditional cloth worn by women in the East African region. The company's financial situation has been deteriorating since the 2000s, owing to many factors. Market factor changes including the depreciation of the Tanzanian shilling (tzs), which increased Urafiki's operating costs and in turn impacted the repayment of Chinese bank loans and interest. In addition, Urafiki was sued by the local labor union and lost the case in 2015; as a result, Urafiki was forced to pay 4 billion tzs (about US\$ 2 million) in compensation to its workers, which as of this research was still being disbursed. Between 2005 and 2017, labor tensions and occasional violence has resulted in strikes, undermining Urafiki's productivity. As of January 2018, Urafiki suspended production and is currently awaiting restructuring plans to be agreed upon by the two governments.

In comparison to Urafiki's ongoing struggles, Tooku Garments, a private company also from Changzhou, is prospering. Set up in 2012 in Dar es Salaam's export processing zone, Tooku is the only Chinese investment in Tanzania's garment industry, producing jeans for international brands including Levis. Over the past five years, its capacity has increased fivefold, from less than 500 local workers to over 2,700. Tooku's owner is an experienced garment manufacturer in Changzhou who learned about the opportunity to invest in Tanzania through Urafiki. In early 2017, the factory was sold to a Taiwanese owner, and it is unclear whether and to what extent the previous owner is still involved in the investment.³¹ We did learn, however, that most of Tooku's middle management has remained unchanged.³² Another garment factory, Mazava Morogoro, is a production unit of Winds Group, a Hong Kong based company owned by Chinese Mauritian investors. It imports raw materials and machinery from Asia and produces sportswear for European and US markets.³³

OTHER MANUFACTURING ACTIVITIES

BESIDES INVESTMENT PROJECTS IN THE PREVIOUSLY-MENTIONED sub-sectors, there are some other manufacturing investments, including motorcycle assembly, furniture making, and manufacturing of daily commodities such as detergents, bottled water, and air filters for cars. There are three Chinese-owned motorcycle assembly plants, KingLion, Fekon, and SANLG. Since assembly requires minimal investment in technology and machinery, all three plants are quite small, investing less than US\$

300,000 and employing 50 or fewer workers. About a dozen Chinese furniture makers have invested in the Dar es Salaam area, most of which use imported sandalwood or other materials, to target high-end consumers in the local market. Sunda International, Twyford Ceramics' parent company, also invested US\$ 5 million in a detergent factory. Additionally, Zhu, owner of T-Better Steel, has two small plants producing bottled water and air filters for cars, each employing 20 to 30 workers. Zhu rents vacant workshop space to two Chinese factories making luggage and shopping bags.

OBSERVATIONS AND ANALYSIS

INVESTMENT MOTIVATIONS

ALTHOUGH THE SIGNIFICANCE OF DIPLOMATIC RELATIONS between China and Tanzania has been reiterated in official rhetoric, it is private investors primarily driven by market factors who dominate Chinese manufacturing and agricultural investments in Tanzania. Some came to Africa to work in the import and export business as early as the 1990s, but the majority arrived after 2010. Almost all of the manufacturing investments we discovered were aimed at local or regional markets in Africa. Although there were exceptions, including Sunshine's cashew nut factory, JIC's spinning factory, and China State sisal farm, which are all exporting to China, and Tooku Garments, which produces jeans for US buyers.

Zhu, who founded the Chinese Chamber of Commerce in Tanzania, is one of the first Chinese expatriate entrepreneurs in Tanzania. He arrived in the late 1990s and started importing daily commodities and building materials, among other manufactured products, from China. "The 1990s and 2000s were the prime time for Chinese traders. You would find golden opportunities lying latent everywhere in Africa."³⁴ He now owns three plants, processing steel tubes, bottled water, and air filters. Similarly, Fekon and KingLion also started with importing motorcycles from China and added assembly lines to their business only recently to save on transportation costs.

Upgrading from trade to manufacturing is a decision made based on the market outlook, cost calculations, and analysis of the competition, as well as government policies. Recent major investments in building materials such as those made by Goodwill, Tywford, and Kiluwa were all motivated by the growing infrastructure sector in Tanzania, which boosts demand for building materials. Even though policy changes and uncertainties under the new administration have alarmed some Chinese investors, large investors like Goodwill and Twyford are still optimistic about the long-term growth of Tanzania's economy. Twyford's general manager remarked that,

"It is the long-term market potential that has led us to invest. Tanzania is a large country compared to its neighbors, and market demand is going to rise despite the short-term fluctuations. In fact, our sales even increased recently, because the anti-corruption campaign in Tanzania has driven

more consumers from high-end market to medium- and low-end markets, which are our main targets.”³⁵

Local manufacturing has the advantage of lowering production costs. It reduces the cost and uncertainty associated with international shipment. More importantly, by manufacturing locally, investors are able to avoid high import duties levied on manufactured products. Since 2005, Tanzania has enforced the East African Community Customs’ tariff scheme, which charges zero import duty on raw materials and machinery used for production, 10 percent for intermediate goods, and 25 percent for finished products.³⁶ This gives manufacturers a price advantage when competing with traders who import manufactured products. In addition, labor costs may be lower for local manufacturing because the wage level in Tanzania is lower than that in China or Southeast Asian countries; however, the lack of skilled labor is a major cause of inefficiency. Another reason for Chinese companies to invest in local manufacturing is to be able to provide customized products and respond to consumer’s real-time demands. CADASP’s manager acknowledged that although local manufacturing does not have an obvious advantage in cost saving, it reduces the time for processing orders with customized size and style requests and shortens the delivery cycle by half.³⁷

Proximity to raw materials is the primary driver for Chinese agricultural investments. China applies different import duty schedules for different agricultural products from Tanzania. Sesame and sisal, for instance, are exempt from Chinese import duty, while cotton is subject to a quota system to protect Chinese cotton farmers. China State Farm managers pointed out that the import of Tanzanian agricultural goods to China is eligible for a government subsidy in China at the rate of one Chinese yuan per one dollar of imports.³⁸ However, none of the other Chinese agricultural companies interviewed received such a subsidy.

Tooku has several factories in Cambodia and Myanmar, employing tens of thousands of workers there. Their Tanzania factory was set up in 2012, motivated by the preferential treatment under the African Growth and Opportunity Act (AGOA).³⁹ The company started with only a few hundred workers but now employs about 2,700 local workers and has become the largest company in the Export Processing Zone Authority (EPZA). A public relations manager from Tooku said that they planned to expand the Tanzanian operation in the next five years, hoping to create a garment industrial park and bring more upstream and downstream firms in the supply chain to Tanzania. “The trend is to relocate labor-intensive production from Asia to Africa to reduce labor cost. For example, the average wage level for our Cambodian factory is US\$ 170 per month, while that of Tanzania is US\$ 50.”⁴⁰

The Tanzanian government provides different incentives to encourage local manufacturing. Qualified “strategic investors” are eligible for the widest range of incentives. Any investment, locally or foreign owned, can apply for strategic investor status from the National Investment Steering Committee, which is made up by a number of Ministers and chaired by the Prime Minister. Criteria for approval includes investment size, employment creation, and technology innovation. Decisions about approval and the types of incentives to be applied are made on a case-by-case basis and

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are not disclosed to the public. As of 2017, TIC's website listed 43 investment projects as having been approved as strategic investments.⁴¹ Four Chinese investments are confirmed to have qualified as strategic investors: Twyford Ceramics, Goodwill Ceramics, Sinoma and Hengya Cement, and Hongda Steel. However, the Hengya Cement and Hongda Steel projects have not yet materialized.

Even with strategic investor status, there are still many inefficiencies in delivering promised incentives to foreign investors. Hongda's manager complained about delays in delivery of government-provided incentives, especially the construction of infrastructure in the local community. "We signed the MoU in 2006 but the exact terms of the incentives haven't been settled yet because the President wants to review all the major contracts."⁴² Another Chinese manager commented that because, as written, the law is vague and not being implemented in a consistent manner, access to tax benefits and other government incentives varies from project to project, and depends largely on the investors' political connections.

Similar to our findings in Kenya, financial incentives provided by the Chinese government have not been a major driver for Chinese manufacturing and agricultural investments in Tanzania. Of all the companies we interviewed, only four - Goodwill, Twyford, JOC, and Kiluwa - received financial support from Chinese provincial and local governments, and the amounts were said to be modest, only enough to cover a portion of pre-establishment expenses or Chinese bank loan interest. Epoch's CEO acknowledged that there are many rules at the implementation level that have limited the availability of government incentives to Chinese overseas investors. For example, many Chinese banks do not accept overseas assets as loan guarantees. As a result, because their primary assets are located abroad, expatriate entrepreneurs are not eligible for loans from Chinese banks. On the other hand, while many small investors did not benefit from government incentives, they did rely quite heavily on state-backed insurance schemes. Sinosure, a state-owned Chinese insurance company, provides export credit insurance to exporters in China against the risk of non-payment by overseas buyers, which relaxes cash flow constraints faced by buyers in Tanzania who import various industrial inputs from China. The line of credit is based on the buyer's past credit history with Sinosure and its financial performance. For example, KingLion received a US\$ 1 million line of credit when it first used Sinosure to buy motorcycle spare parts from China; after three years, its credit line was raised to US\$ 4 million.

Chinese government involvement in overseas investment takes multiple forms beyond subsidies and export credits. When Zhu Rongji, the former Chinese Prime Minister, instructed Changzhou Textile to take an equity stake in the Urafiki factory, EximBank provided a 200 million Chinese yuan subsidized loan for a technology upgrade. In the case of China State Farm, the China Land Reclamation Group Corporation purchased the sisal farm from its previous owner - Tanzania's former Ambassador to France - under the brokerage of a Chinese government official, and China's EximBank promised to provide a US\$ 9 million loan to support the farm; however, only US\$ 1.5 million was disbursed because China State Farm's parent company failed to provide collateral for the loan. Hongda Steel arrived in Tanzania as

part of a delegation led by the Chinese government in 2006, during which it decided to invest in the iron ore mining industry in Tanzania. Originally, the investment was made by a consortium of Chinese companies, with Hongda taking the lead and CADFund holding a ten percent stake. However, it is uncertain if arrangements among Chinese investors have changed or not, since little progress has been made on this specific venture over the years. For Epoch, obtaining government endorsement has been crucial for its maize industrialization project. After lobbying the Chinese and Tanzanian governments for three years, Epoch's general manager finally witnessed the signing of a bilateral agreement between the two governments to legalize the export of maize products to China.

INDUSTRIAL CLUSTERING AND CHINESE BUSINESS NETWORKS

AS PREVIOUSLY STATED, THERE ARE A NUMBER OF CHINESE investment projects in the plastic sector, including recycling and production of plastic footwear, packaging materials, and household products. Many investors in the plastic industry are related by familial bonds or personal networks. In the plastic footwear cluster, Zhongfu International was among the first to set up local production. Weng, the owner, moved his plant from Cameroon to Tanzania in 2005, thinking that Tanzania was a bigger market with a more stable political environment. Over the years, Zhongfu has grown from 100 to 400 local workers, with a total investment of US\$ 10 million. Subsequently, Weng's sister, daughter, in-laws, and family friends have also set up several factories. For companies in plastic recycling and packaging material manufacturing, most investors come from Fujian and Zhejiang Provinces. The earliest investments were established in 2000, followed by their former business partners, co-investors, relatives, and friends. Companies engaging in the same manufacturing activities or producing the same products usually compete fiercely over raw materials and sales, but it is much easier for those in different sub-sectors to cooperate. For instance, factories recycling and exporting PET waste also deal with PP and PE materials, and sell the latter to other Chinese factories producing packaging materials and household items. In addition, the Chinese granule-making factories we interviewed also preferred selling to Chinese plastic manufacturers over other buyers because they believed that it was more certain to ensure payment within the Chinese business network. For companies in the same business competition and cooperation can co-exist, however. Cooperation includes occasional borrowing and lending of spare machine parts or raw materials between one another and joint actions that are beneficial to all participants, such as joint applications for quality inspections in order to save on costs. There are two industrial associations for Chinese plastic shopping bag producers and plastic footwear producers, which coordinate competition and pricing strategies among its members. However, these joint or cooperative actions are still too early in their development to be considered a fully-fledged industrial cluster.

During our fieldwork, we also identified several informal industrial estates. Owned by individual entrepreneurs, these industrial estates are smaller than officially

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registered special economic zones or export processing zones. For example, Zhu rented vacant workshops to four factories making plastic slippers and suitcases. Similarly, Zhongfu International also leases spaces to a plastic woven sack manufacturer and a factory processing plywood. There are two or three other private industrial estates like this as well. The existence of private industrial estates has many implications. First, they reduce transaction costs by providing facility management and services such as assistance in obtaining administrative approval, though the extent and quality of the services vary. Secondly, cross-shareholding and other financial or personnel linkages among firms has fostered strong networks among companies in the same industrial estate. Last, these networks also increase the opacity of firm operations, especially in terms of compliance.

Chinese private investments and SOEs are also connected through various personal and financial networks. Although most Chinese manufacturing and agricultural investments in Tanzania are privately owned, nearly one third of the managers and entrepreneurs of these private companies have previously worked in SOEs or engaged in business cooperation with them. For example, Samaki Plastic's owner and JOC's manager both worked for Urafiki for over ten years. Meanwhile, Canghui, Samaki, and two other plastic woven sack manufacturers are currently renting factory spaces from Urafiki. CADASP, a glass factory, started its operations as a sub-contractor for Chinese construction companies. Another example is Sinoma, a central SOE that has been engaging in importing and distributing building materials in Tanzania for over a decade. With no prior experience in manufacturing in Tanzania, it chose to collaborate with private firms that had expertise in related industries. It acquired a majority ownership in Sunshine's gypsum board factory and expanded production capacity tenfold.

Additionally, there are several Chinese business associations operating in Tanzania. Many are organized based on their industry or geographical origin in China and sometimes have overlapping mandates and activities. The function of these business associations varies from monitoring security alerts and organizing philanthropic activities to advising on general affairs such as corporate registration or customs clearance, and mediating employer-employee disputes (among Chinese). When Chinese traders and investors felt the influence of recent policy changes in Tanzania, they called upon these Chinese business associations to hold discussions on possible responsive measures. Agreements were reached to take joint action on tax compliance and safety matters.⁴³ Coordinated actions are crucial because without a level playing field, investors are likely to engage in a race to the bottom in compliance strategies, considering that paying taxes when others don't will increase their operational cost and therefore reduce their competitive advantage in the market. In addition, when some Chinese companies felt that punitive fines were set too high by the tax enforcement authority, they would request business associations to act as a proxy for all Chinese investors and negotiate with the authority for an "amicable resolution". Finally, in order to complement the ineffective local police force, business associations have also taken the lead in establishing a self-help mechanism to address

Chinese investors' safety concerns. However, under many circumstances, Chinese business associations are reactive rather than proactive in local policy-making and the leadership and personalities of individual organizers dictates the effectiveness of these collective actions.

LOCAL LINKAGES

WE FOUND THAT ALTHOUGH CHINESE INVESTMENTS in Tanzania arrived later than many other foreign investments, they have already created various linkages with the local economy. They have facilitated knowledge transfer through developing local supply networks, providing training opportunities in collaboration with government and vocational training institutions, engaging in technological and financial cooperation with local firms, and contributing to setting local standards. Most of these linkages depend on personal networks; in other words, they are neither consistent nor coordinated. We found fewer forward linkages than backward linkages and knowledge transfer remains limited. Nonetheless, there are hopes for strengthening spillover effects in some sectors.

LOCAL SUPPLY NETWORKS

TWO CHINESE-OWNED SMELTERS USE LOCALLY RECYCLED iron and aluminum scrap. The aluminum smelting company uses local aluminum scrap for one fifth of its raw materials; remaining inputs are aluminum ingots imported from the Middle East and South Africa. As the only aluminum recycling plant in Tanzania, the company absorbs a substantial amount of aluminum waste, which used to be exported to South Africa and other countries.⁴⁴ It also assisted its local suppliers to improve recycling techniques, teaching them about sorting techniques and the characteristics of different metals. In iron recycling and smelting, about 30 percent of Hongyu Steel's raw materials come from local recyclables and the rest is imported from the US and North Africa.

Plastic recycling and reprocessing is another major sub-sector that has developed its own local supply network. Except for plastic footwear manufacturers, all the Chinese producers we encountered use locally recycled plastic waste. Plastic recycling was almost non-existent until Chinese investments entered the market. A majority of the recycling supply comes from trash transfer stations and recycling plants in Dar es Salaam, but a few dozen recycling workshops located in rural areas are also supplying Chinese plastic factories. Chinese factories have helped improve local suppliers' cleaning and sorting techniques, through quality inspections based on different characteristics and colors of the plastic material.

All Chinese agro-processing companies in Tanzania procure raw materials locally. Chinese investors have encountered challenges with local procurement and strict government regulations of the agricultural industry, which are exacerbated by their overall inexperience. According to Sunshine's manager, many agricultural sub-sectors

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including cotton and sunflower are still dominated by uncoordinated, small household producers, which presents a challenge for local purchasing. Many companies, including Sunshine, Jielong, and JOC, have expressed interest in engaging in contract farming. However, acknowledging that sub-contracting requires extensive local knowledge and networks, which most Chinese investors do not possess at this stage, none have been able to implement a contract farming plan. Urafiki also buys from local cotton farmers for production, but they seem to have failed to develop a stable supply network. In 2011, Urafiki was forced to suspend production for several months due to a shortage of cotton supplies.

Factories producing plywood, gypsum board, paint, ceramics, and detergents also procure their basic raw materials from the local market, including timber, clay, coal, quartz, and sulphonic acid; however, all chemical inputs are imported from abroad. There is some evidence of spillover effects, as in the case of Twyford, which was responsible for stimulating the demand for clay mining and a local supply of sulphonic acid, both of which did not exist in Tanzania before Twyford's arrival. However, little technological linkages and other spillover effects have been fostered between these Chinese producers and local suppliers thus far.

LOCAL TRAINING

ALL THE INTERVIEWED CHINESE COMPANIES PROVIDE learning-by-doing or on-site training opportunities to their employees. Some of them, especially large firms like Twyford, Tooku, JOC, and Ocean Kiss, also offer in-class or video-taped sessions on topics like corporate culture, workplace safety, and machine operation. Most of the factories have brought technicians from China to train the local workforce. While local workers are trusted with machinery operation, maintenance and repair is often supervised by Chinese technicians. In plastic and metal recycling plants, workers are first trained to sort and clean different types of materials; those who work in production workshops learn more complicated technology such as temperature control and adjustment. In plastic slipper manufacturing, local workers are taught to operate injection molding machines, but formulas are developed and implemented by Chinese technicians. In motorcycle assembly plants, workers are not only trained for basic assembly, but also to understand the mechanics and skills that are required for providing post-sale services.

Larger companies, like Urafiki, normally have more standardized training programs for their local employees. When Urafiki was run by the Tanzanian government as a parastatal enterprise, Tanzanian technicians were sent to China for training. After the joint venture was set up, more Chinese experts were brought to Urafiki to train local workers. By the mid-2000s, a sufficient number of local technicians had been trained to supervise the work of new recruits. However, along with more intensive training comes the issue of skilled workers being poached by other companies. Managers at Urafiki and Tooku consider poaching of skilled workers a serious problem for their factories, "workers received comprehensive training in our

factory and then moved on to other textile factories because they were offered higher salaries."⁴⁵

Tooku Garments brought experienced personnel from its mainland Chinese and Cambodian operations to train workers in Tanzania. It also sent ten workers to Kenyan garment factories for two-to-four-week trainings, but stopped doing so because of concerns about cost. Tooku's administrative affairs manager mentioned that the factory also tried to train their workers for multiple operations in order to minimize interruption in production when someone takes sick leave but explained that the workers have little motivation to learn more than one operation. Tooku has also organized short visits for selected local employees to go to China, designed as both an incentive for local managers and production leaders and an opportunity for them to learn the corporate culture, and implemented a performance-based bonus system to incentivize its' workers. According to officials from the Tanzania Union of Industrial and Commercial Workers (TUICO), the system has been quite effective since the bonus can amount to double the base salary.

Although Twyford Ceramics only began production in Tanzania in November 2017, their operations in Ghana and Kenya have been established for much longer. Twyford's factory brought about 100 technicians from China to train its workers in Africa, some technicians were also sent by Keda China, Twyford's co-investor and machinery supplier. Twyford is also working on a company-wide credential evaluation system, under which all workers' performance would be reviewed periodically as the basis for determining bonuses, promotions, and renewal of employment contracts. Some jobs such as grading and packaging take less time for training but other positions, such as formula development, design, and safety management, require extensive knowledge and industry experience and are hence more difficult to localize. Twyford has set a target to reach 95 percent workforce localization in the next five years. According to Twyford Tanzania's general manager, "We see localization as a risk management method especially in countries like Tanzania where policy uncertainty is very high, and the current administration has taken a more restrictive approach towards foreign employment."⁴⁶

Overall, Chinese investors are willing to train more local workers to replace Chinese employees in order to reduce operational costs or to mitigate the difficulties of obtaining work permits for Chinese nationals. Most Chinese firms interviewed have gradually reduced their Chinese workforce. Thus far, it appears to be easier to localize administrative and financial positions than technical positions. First, the Tanzanian government has put more restrictions on issuing work permits for financial and management positions, forcing Chinese investors to hire local employees. Secondly, according to Chinese investors attending the China-Tanzania job fair, young college graduates in Tanzania seem to prefer administrative and financial related positions over technical jobs. Even though demand for technical positions was higher, investors received many more applications for positions like accountants or human resource managers than they did for mechanists and engineers.

Another constraint for some Chinese employers to invest in local training are the difficulties associated with retaining skilled labor. Frequent occasions of poaching by competitors or cases of skilled laborers moving on to higher-paying jobs are the most often cited issues, specifically. Nonetheless, we also found that investor input into training and employee loyalty are somewhat reciprocal in many situations. Employee turnover rate is significantly higher in unskilled, labor-intensive jobs that require minimum training than in more skilled positions such as electricians, mechanics, and production leaders, who have received more training from the company. Employers are coming to realize the relationship between investing in local training and employee loyalty. As Sunshine's general manager puts it, "reciprocity and mutual trust take time to develop but they are essential for investors to succeed in a foreign market."⁴⁷

TECHNOLOGICAL COOPERATION WITH OTHER FIRMS AND INSTITUTIONS

TOOKU GARMENTS, AS ONE OF THE LARGEST, PRIVATELY-OWNED manufacturing investments from China, has the most extensive technological cooperation with local governments and institutions. Tooku has been collaborating with the Tanzanian Ministry of Industry and Commerce and TUICO to offer assistance for vocational training since its establishment in 2012. Between 2012 and 2018, Tooku has provided machines to be used by vocational training institutes, with training costs being covered by the Tanzanian government. However, this has proven inefficient because teachers at these institutes often lack the knowledge of how to operate, maintain, and repair the imported machines and, as a result, those machines have just ended up collecting dust in school workshops. A new agreement was reached in 2017, under which the government subsidizes the cost of the first three months of new employee training (about 90,000 tzs or US\$ 400 per person) which should serve as an incentive for Tooku to focus on recruitment and training. So far, more than 500 university graduates were said to have received training under this program.⁴⁸ However, according to officials from TUICO, most of these trainees were not willing to stay on the job; they wanted the training to pad their resumes but in reality were pursuing higher-paying office work. Therefore, in order to increase efficiency and provide training opportunities to people who need the training and are more likely to continue working in the factory or at least in a related industry, Tooku and the Tanzanian government must improve the selection process for training programs.

For nearly a decade, China State Farm has also been cooperating with China's State Council's International Poverty Alleviation Center and the Tanzanian Ministry of Industry and Commerce to run an agricultural technology demonstration program in Peapea village. Agricultural technology experts from China Agriculture University arrive in Peapea twice a year to provide short-term training programs on how to improve plant and harvesting techniques. According to a manager from China State Farm, to date, over 640 local households have participated in the program.⁴⁹ This program also provides summer internships to students from China Agriculture University. About eight Tanzanian employees from the sisal farm were sent to China

Agriculture University to receive short-term training on agricultural management and technology, but this was more of an *ad hoc* occurrence rather than a regularized practice.

In addition, Urafiki has also cooperated with some local universities and training institutes. They had a trainee program under which college graduates rotated among different Urafiki departments to work as assistants to managers or production leaders and learn management skills. They have also invited students to visit the factory and workshops as a supplement to classroom teaching. Several other Chinese companies have also provided internship opportunities for students from local vocational training institutions, but most of these arrangements are based on personal networks and do not qualify as institutionalized cooperation.

In plastic recycling, a number of Chinese companies have provided technological and financial assistance to their local suppliers and sub-contractors. For example, several Chinese factories have sold their old shredding machines to local waste transfer station workshops and provided technical assistance for machinery repair and spare parts. This cooperation is beneficial to both parties since local recyclers can earn a higher profit margin by reducing transportation costs while engaging in preliminary processing and Chinese plastic factories are able to make use of their out-dated machines and ensure future supplies of raw materials. A small number of local recyclers were able to move from recycling to plastic product manufacturing, demonstrating backward spillover effects. One local recycler in Zanzibar, Amour, learned from his interactions - as a supplier - with Chinese and Indian plastic factories that manufacturing has a higher profit margin; he ordered machines from a Chinese online vendor and started making plastic plumbing pipes for the local market in 2015.

Some Chinese companies cooperate with their former employees through sub-contracting and distribution networks. Approximately eight former Tanzanian employees from CADASP have started their own business in aluminum assembly and are now acting as sub-contractors for specific tasks such as installation. The owner of CADASP pointed out that he is willing to work with former Tanzanian workers because there is complementarity in their business, *i.e.* they focus on sub-contracting and small-scale projects whereas other Chinese companies would compete for clients and business. In another case, Fekon Motors promoted five employees to managers of its retail shops. Some of the promoted managers were able to obtain sufficient funding to buy these shops and went on to become distributors for Fekon. Management experience, knowledge of customer preferences, repairing skills, and post-sale services are all important factors that helped determine Fekon's local employees' development.

CHALLENGES FOR INVESTORS

TANZANIA OFFERS SECURITY, POLITICAL STABILITY, and a relatively large domestic market to attract foreign investment. At the same time, there are notable economic and political constraints that continue to hamper the economic growth and investor

confidence in the country, including poor infrastructure and energy supply, underdeveloped local supply chains, regulatory uncertainty, and cultural differences.

Poor transportation infrastructure and insufficient energy supply constitute the two major constraints for manufacturing investments. In 2015, only 19 percent of Tanzania's national roads and two percent of its district roads were paved.⁵⁰ Generation and distribution of electricity is monopolized by The Tanzania Electric Supply Company Limited (TANESCO), which has been criticized for poor financial management and over-dependence on hydropower. According to USAID, electricity production in Tanzania met less than 15 percent of the demand.⁵¹ Most Chinese manufacturing projects are located in Dar es Salaam, but a few of them like Hongda Steel, Goodwill, and Twyford are located outside the city and have had to develop their own infrastructure and power supply. A manager from Hongda Steel complained that the Tanzanian government failed to deliver on its promise to develop road infrastructure for the mining area. Goodwill and Twyford reported that they were asked by the local government to tie their electricity generation systems to TANESCO's national grid; the Chinese investors refused to do so because the price for selling electricity back to the grid was too low. In addition, Twyford relies on imported coal for its power generation because local coalmines are underdeveloped. However, the Tanzanian government has recently banned the import of coal in order to encourage investment in its mining sector. It is uncertain whether and how the ban will be enforced.

In agro-processing, dispersed agricultural production and fragmented land ownership make it difficult for investors to procure necessary inputs locally. Cash crop farming like cotton and sunflower is largely dominated by small households. In 2015, Sunshine hired 135 agents who worked with over 500 small brokers to purchase raw cotton from local farmers for its ginnery. Insufficient monitoring, information asymmetry, and the lack of a reliable dispute resolution system has increased both costs and risks of these operations. Furthermore, manufacturers can only buy basic raw materials in local markets. For intermediate inputs and machine parts, manufacturers have to turn to imports since these items are not available locally. This not only raises investor's production costs but also restricts the development of high value-added manufacturing as well as backward and forward linkages. Lack of skilled labor constitutes another obstacle for expansion. Few Chinese employers have found local vocational training programs that were effective in providing training of practical skills. Due to the shortage of skilled labor, poaching experienced workers from competitors has become a common strategy, which provides another disincentive for employers to invest in local training.

Previous studies have shown that regulatory risks such as policy uncertainty and implementation gaps have affected manufacturing firms' productivity in Tanzania.⁵² In particular, many were concerned that promised financial incentives such as duty exemption for imported machinery and equipment were not implemented. Additionally, government review procedures for large investment projects were prolonged and approval processes for work permits for non-Tanzanian workers were

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tightened. Some companies, especially small ones, also complained that aggressive state tax enforcement tactics were used by some rent-seeking officials. However, one Chinese investor underlined, "many Chinese companies operating in Africa have assumed that African governments will not enforce tax and other regulations; therefore, they employed tax avoidance as a strategy for increasing their profit margin and competitive advantage *vis-à-vis* the law-abiding companies. It's time for them to change their way of thinking and doing business."⁵³ Recently, the Tanzanian tax enforcement authority seemed to be sending signals of flexibility in law enforcement. In 2017, the government issued a US\$ 190 billion fine for Acacia Mining - a U.K. listed gold mining company that has operated in Tanzania for decades; they eventually agreed to settle the dispute with a one-off payment of US\$ 300 million.⁵⁴ Several Chinese companies reported that they had also been threatened with incredibly large fines and then were allowed to negotiate with the government for "less expensive settlements". This practice was viewed by many Chinese investors as indicating regulatory uncertainty and corruption in the host government, which reduced investor confidence and impacted decisions about future investments.

Last but not least, cultural differences also present a challenge for Chinese companies to do business in Africa. As scholars have pointed out the importance of high saving rates in enabling and maintaining capital accumulation and economic growth in East Africa, many Chinese investors have complained about the lack of a savings culture in African countries.⁵⁵ One Chinese factory owner in the plastic industry laughed, "I receive requests for salary advances from local workers every day. Every time after wage is disbursed, there are fewer workers showing up for work and they won't come back until they've spent all the money."⁵⁶ Chinese companies have developed different strategies to deal with the abovementioned problem. In some companies, local employees are divided into several groups and receive wage disbursements in turns in order to maintain attendance stability and keep production uninterrupted. Others use piece rate wage or performance-based bonuses to motivate their local workers. One company, Sunshine, has set up a "mutual aid fund", which draws on the practice of credit rotation associations in China and provides need-based micro-loans to its local employees. The company provided the initial funding, a committee consisting of employee representatives is responsible for reviewing loan applications from local workers, and repayment is guaranteed by peer pressure and the borrower's future salary. Sunshine's general manager viewed the fund as an effective way of institutionalizing the practice informal borrowing by making the process more transparent and accountable, and simultaneously fostering a cooperative culture and retaining skilled local workers. "The Chinese investors are here to do business, not public interest, but reciprocity and mutual trust are very important. Many Chinese investors complain about resistance from local workers, but we also need to learn to adapt to local customs and culture for the sake of long-term development."⁵⁷

CONCLUSION

INVESTIGATING CHINESE INVESTMENTS IN THE MANUFACTURING and agro-processing industries in Tanzania we found that most investments in these two sectors have been driven by the potential of African markets and access to raw materials and cheap labor, rather than financial incentives provided by the Chinese government. However, indirect state influence such as Sinosure's export credit insurance, Chinese international contractors' activities, and coordination with Chinese business networks have benefited Chinese investments in Tanzania. However, the increasing regulatory uncertainty and risks under Tanzania's current administration as well as gaps in policy implementation have hampered investors' confidence in the country.

We have found evidence of knowledge transfer from Chinese investments to the local industry, including job training, supply chain development, sub-contracting, and technology cooperation with local governments and firms. While systematic knowledge transfer has yet to be developed, the establishment of a few large manufacturing projects such as Goodwill Ceramics, Twyford Ceramics, and Tooku Garments has provided more opportunities for employment creation and on-the-job training. Chinese investors, in general, have shown the willingness to localize employment and enhance local training as ways of reducing operational costs and risk management, especially when obtaining work permits for Chinese employees has become more difficult under Tanzania's current administration. Companies such as Twyford Ceramics have established self-regulatory targets to gradually increase the percentage of local employment. Overall, investments by expatriate entrepreneurs with years of experience doing business in Arica have demonstrated a higher degree of localization in both employment and management, suggesting that the length of operation in host countries is an important factor affecting localization. ★

ENDNOTES

1. China and Tanzania on Economic and Trade Relations, Chinese Embassy in Tanzania, <http://tz.china-embassy.org/eng/ztgx/jj/t421433.htm>, last visited on: August 15, 2017; Opinion of China, Global Indicators Database, Pew Research Center, <http://www.pewglobal.org/database/indicator/24/>. However, it is also interesting to note that the favorable view of China in Tanzania has decreased from 77 percent in 2014 to 63 percent in 2017. Opinion of China, Percent of Tanzania responding Favorable, Pew Research Center, <http://www.pewglobal.org/database/indicator/24/country/216/>.
2. "Tanzania: The Belt and Road Initiative and China-Tanzania Relations," *FOCAC news*, May 11, 2017, <http://www.focac.org/eng/zxxx/t1460565.htm>.
3. Benno Ndulu and Nkunde Mwase, "The Building Blocks towards Tanzania's Prosperity: Lessons from Looking Back, and the Way Forward," in Christopher S. Adam, Paul Collier, and Benno Ndulu ed., *Tanzania: The Path to Prosperity*, Oxford University Press, 2017, p. 12-16.
4. CCM was created by a merger between Tanganyika African National Union (TANU), which ruled mainland Tanganyika, and the Afro-Shirazi Party (ASP) from Zanzibar.
5. World Bank data, accessible at: <http://data.worldbank.org/?locations=TZ-KE>, last visited: August 15, 2017.
6. World Bank data, accessible at: <http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=TZ> (last visited: August 17, 2017).
7. Brian Cooksey and Tim Kelsall, "The Political Economy of the Investment Climate in Tanzania," The Overseas Development Institute Research Report 2011, p. 32-36.
8. Haidari Amani, *et al.*, "Understanding Economic and Political Reforms in Tanzania," GDN Report, 2004, p. 38.
9. Ndulu and Mwase, "The Building Blocks towards Tanzania's Prosperity," p. 28.
10. See the 2009 Electronic and Postal Communications Act and 2010 Mining Act (pursuant to the latter act the Ministry of Energy and Minerals has the discretion to impose the government ownership requirement on foreign mining companies.)
11. Note that there is some discrepancy between Tanzania's official statistics on FDI flow and that reported by international organizations between 2000 and 2004. For example, the national statistics on FDI flow in 2000 is US\$ 282 million while World Bank data is US\$ 463 million.
12. Tanzania: Special Country Report (2014), Tanzania Investment Center, p. 11. Note that all the data should be read with caution, because when Tanzania removed exchange controls, the absence of data tracking mechanisms creates serious data problems. Tanzania Investment Report (2001), published jointly by the Bank of Tanzania, Tanzania Investment Center and National Bureau of Statistics, p. 4. In addition, scholars have also criticized the optimistic reporting of Tanzania's economic statistics. See Michael F. Lofchie, *The Political Economy of Tanzania: Decline and Recovery*, University of Pennsylvania Press 2014, p. 205 (pointing out that "Tanzania has a multidimensional need for the donor presence and donor agencies have an institutional interest in maximizing the appearance of benevolent outcomes").
13. Tanzania Investment Report 2014, Bank of Tanzania, p. 16.
14. Interview with Han, general manager of Sunshine Group, June 12, 2017, Dar es Salaam.
15. 2017 Investment Climate Statements: Tanzania, US Department of State, June 29, 2017, accessible at: <https://www.state.gov/e/eb/rls/othr/ics/2017/af/269789.htm>.
16. Martin Bailey, "Tanzania and China," 74 *African Affairs* 39: 48 (1975).
17. China and Tanzania on Economic and Trade Relations and Economic and Technical Cooperation, Chinese Embassy in Tanzania, <http://tz.china-embassy.org/eng/ztgx/jj/t421433.htm> (last visited: August 15, 2017).
18. World Bank data, <http://wits.worldbank.org/CountryProfile/en/Country/TZA/Year/2015/TradeFlow/Import> (last visited: August 20, 2017).

19. China's official statistics on overseas investment did not exist until 2002, and a cooperation system between different government agencies for consistent data reporting was only established in 2006. In Tanzania, data tracking mechanisms are absent since the removal of exchange controls under the structural adjustment program. Company surveys on foreign investment are not conducted regularly or in a consistent manner.
20. The 2015 Statistical Bulletin of China's Outward Foreign Direct Investment, p. 44. Statistics on breakdown of China's FDI flows to Africa by countries in 2016 and 2017 was not disclosed by the Chinese government.
21. Findings from the previous research were consolidated and published in a 2018 article: Deborah Brautigam, Tang Xiaoyang, and Ying Xia, "What Kinds of Chinese 'Geese' Are Flying to Africa? Evidence from Chinese Manufacturing Firms," 27 *Journal of African Economies* 29 (2018).
22. Ying Xia. 2019. *Wealth from Waste? Chinese Investments and Technology Transfer in the Tanzanian Plastic Recycling Industry*. Working Paper No. 2019/27. China Africa Research Initiative, School of Advanced International Studies, Johns Hopkins University, Washington, DC. Retrieved from <http://www.sais-cari.org/publications>.
23. "Chinese investors to build giant cement factory in Tanzania," *Xinhua News*, March 1, 2017, xinhuanet.com.
24. Interview with sales manager at SinoMaterial, Dar es Salaam, January 18, 2018.
25. Interview with Kenya-China Economic and Trade Association, July 11, 2017.
26. Interview with cable producer, Dar es Salaam, July 25, 2017.
27. Interview with Hongda Steel, Dar es Salaam, June 20, 2017.
28. This is an estimate provided by the Association of Chinese Plastic Producers, Dar es Salaam, January 20, 2018.
29. Interview with Chinese plastic factories, Dar es Salaam, January, 2018.
30. Interview with Feng, CEO of Epoch Group, June 10, 2017.
31. Interview with other Chinese investors from Changzhou, Dar es Salaam, July 24, 2017.
32. *Ibid.*
33. We confirmed the existence of Mazava Morogoro through our contacts in Tooku, but unfortunately, we couldn't convince them to grant us an interview.
34. Interview with Zhu, owner of T-Better Investment Co., Dar es Salaam, June 19, 2017.
35. Interview with Feng, country manager of Sunda International and Twyford Ceramics, Dar es Salaam, June 16, 2017.
36. Ministry of Finance and Planning of Tanzania, http://www.mof.go.tz/index.php?option=com_content&id=41:import-duty&Itemid=56 (last visited: August 26, 2017).
37. Interview with Yu, general manager of CADASP, Dar es Salaam, July 3, 2017.
38. Interview with China State Farm, Morogoro, July 15, 2017.
39. The arrangements between Tooku and its buyers is free-on-board (FOB) model, meaning that Tooku is only responsible for processing and assembling at a fixed price, and procurement of raw materials as well as international shipping are all handled by its US buyers.
40. Interview with Hu, public relations manager at Tooku, Dar es Salaam, June 20, 2017.
41. "Strategic Investors," Tanzania Investment Center, www.tiz.co.tz (last visited: July 22, 2017).
42. Interview with Tao, country manager of Hongda Steel, Dar es Salaam, June 20, 2017.
43. "Reactions to policy change of the Tanzanian government," *Sohu News*, June 23, 2017, sohu.com.
44. According to the general manager of the Chinese aluminum smelter, there was a small local factory producing aluminum pans using recycled scrap, but it had closed its business a few years ago. We were unable to verify the existence of this factory from other sources.
45. Interview with Ma, general manager of Urafiki Textile, Dar es Salaam, June 20, 2017.

46. Interview with Feng, general manager of Twyford Tanzania, Dar es Salaam, June 16, 2017.
47. Interview with Han, general manager of Sunshine Group, Dar es Salaam, June 12, 2017.
48. Interview with TUICO, Dar es Salaam, June 15, 2017.
49. Interview with China State Farm, Morogoro, July 15, 2017.
50. "Tanzania Roads," TIC, accessible at: <https://www.tanzaniainvest.com/roads>.
51. Tanzania Energy Sector Overview, USAID, accessible at: <https://www.usaid.gov/powerafrica/tanzania>.
52. Micheline Goedhuys, Norbert Janz, and Pierre Mohnen, "What drives productivity in Tanzanian manufacturing firms: technology or business environment?" 20 *The European Journal of Development Research* 199 (2008).
53. Interview with a Chinese investor in the manufacturing industry, Dar es Salaam.
54. Jon Yeomans, "Acacia Mining shares surge as Barrick strikes deal with Tanzania," *Telegraph news*, October 19, 2017, <https://www.telegraph.co.uk/business/2017/10/19/acacia-mining-shares-surge-barrick-strikes-deal-tanzania/>.
55. Joseph Stiglitz, "Some lessons from the East Asian miracle," 11 *The world Bank research observer* 151 (1996); Susan Collins, Barry Bosworth, Dani Rodrik, "Economic growth in East Asia: accumulation versus assimilation," *Brookings Papers on Economic Activity* 135 (1996.2).
56. Interview with Yu, owner of Samaki Plastic, Dar es Salaam, July 5, 2017.
57. Interview with Han, general manager of Sunshine Group, Dar es Salaam, June 12, 2017.

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