

## POLICY POINTS

**Four kinds of Chinese firms**

are investing in African manufacturing. The four kinds of firms each offer different kinds of development opportunities and challenges.

**Chinese manufacturing**

**investment** is contributing to local value addition and technology transfer, but so far both are still at a preliminary stage.

**Some non-Chinese**

**manufacturing firms** have benefited from technical assistance from Chinese experts.

## What Kinds of Chinese “Geese” Are Flying to Africa? Evidence from Chinese Manufacturing Firms

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THIS REPORT PROVIDES A PRELIMINARY ANALYSIS OF THE NATURE of Chinese manufacturing investments, focusing predominantly on Ethiopia, Ghana, Nigeria, and Tanzania. Drawing on fieldwork conducted between 2014 and 2016, the paper explores the varieties of existing Chinese manufacturing investment and the sectors into which Chinese companies are investing.

As costs of production in China’s coastal factory belt began to rise around 2005, China’s labor-intensive companies began seeking offshore production locations. Coupled with China’s economic slowdown, overcapacity challenges created an additional incentive for companies to move to less competitive locations overseas. The Chinese government announced new inducements to boost industrial cooperation between China and Africa in late 2015. Japanese scholar Kaname Akamatsu described this shift as the “flying geese” model.<sup>1</sup> Akamatsu detailed a phenomenon already underway in Asia in the 1950s, where the “lead geese” were located in the West, but companies in countries like Japan were catching up and would take over the lead goose position. Production would then eventually move from Japan to other parts of Asia. Today, Chinese manufacturers moving out of an increasingly high cost China could be a new generation of “flying geese.”

We demonstrate that Chinese manufacturing investment in Africa is expanding rapidly. Several investors fit the model of Akamatsu’s “flying geese”—large, export-oriented firms seeking new locations for production as part of global networks and value chains. However, we also identified three other kinds of “geese”: large, strategic, local market-seeking geese; raw material-seeking geese; and small geese travelling together in flocks. The four kinds of firms each offer different kinds of development opportunities and challenges.

## METHODOLOGY

WE BEGAN BY LOCATING AFRICAN COUNTRIES where Chinese companies appeared to have set up a significant number of manufacturing operations. Obtaining a database of overseas foreign direct investment (OFDI) registrations between 2000 and 2014 from MOFCOM we found that the number of manufacturing proposals submitted by Chinese firms for investment approval in Africa began rising sharply in 2005. They reached a

peak of 162 in 2013, with over a thousand proposals registered between 2000 and 2015.<sup>2</sup>

We selected four sub-Saharan African countries with the largest number of manufacturing investment registrations for further investigation: Ethiopia, Ghana, Nigeria, and Tanzania. In 2014 and 2015, we conducted field-scoping studies to identify and visit Chinese manufacturers in those countries. We then identified the sector and products being produced, ownership structure, age of the firm, and its patterns of employment.

The firms interviewed for this study all focused on relatively simple, entry-stage manufacturing, in a mix of export-oriented and import-substitution products. At least 15 firms interviewed were producing plastics; 18 in metal and mineral-based building materials such as glass, recycled steel, aluminum, ceramics, and gypsum board; eight in textiles and apparel including garment factories, dying, spinning, and weaving; and 11 in leather and related operations such as tanneries and shoe factories.

#### **PRELIMINARY ANALYSIS: WHICH GEESE?**

WHILE THERE IS SOME OVERLAP among investment projects and investors, we find that Chinese manufacturing ventures tend to fall into one of four categories of “geese”.

#### **A. GEESE SEEKING RAW MATERIALS**

MOST OF AFRICA'S RAW MINERALS ARE EXPORTED, without any refining or smelting, to higher income countries where capital and energy-intensive processing takes place.<sup>3</sup> Although, in these four countries we found only a few examples of manufacturing companies seeking raw materials to process and then export. The most significant group of raw material-seeking investment was found in the cluster of Chinese firms tanning, finishing, and ultimately manufacturing leather in Ethiopia.

#### **B. LARGE, GLOBAL SUPPLY CHAIN GEESE**

WE FOUND A SMALL BUT SIGNIFICANT sample of Chinese firms that have relocated garment and shoe production to Tanzania and Ethiopia. Because of its labor-intensive nature, garment production for export is normally one of the earliest activities to offshore when labor costs begin to rise during structural transformation. Thus garment producers are the first “flying geese” to migrate abroad. JDU (owner of Tanzanian subsidiary, Tooku) produced mainly in China and in Cambodia prior to Tooku's founding in 2012. Their website notes that Tanzania was chosen for its lower labor costs and its access to the US market through the African Growth and Opportunity Act (AGOA).

Two large shoe factories, Huajian from China and New Wing from Hong Kong, invested in Ethiopia to take advantage of the low labor costs, abundant leather supply, and incentives for duty-free entry into the United States under AGOA and also into the EU under the “Everything But Arms” arrangement (EBA). George Shoes also opened a new production base in Addis Ababa in 2014. All three factories export to the US through international shoe agents. These three large factories are located in industrial zones that bear some resemblance to export processing zones in the first waves of “flying geese”.

#### **C. STRATEGIC, LOCAL MARKET-SEEKING GEESE**

WE FOUND AN IMPORTANT category of Chinese manufacturing in which entrepreneurs are designating capital for substantial import substitution investments targeting local markets. The firms in this category were nearly all privately owned, and previously involved in trade, usually exporting a Chinese product that they eventually began producing in Africa. Others came up with product ideas through market studies and consumer surveys.

Competition from imports of Chinese goods is conventionally believed to have decimated African manufacturing. Yet clearly, a number of the Chinese firms we interviewed moved to Africa because they found the import substitution opportunities quite attractive. Xin'an, one of China's largest private agrochemical producers, purchased Sunrise, a small Ghanaian agricultural chemicals trading company and former customer, in order to use its sales channels, social network, and licenses. After the acquisition in 2012, Xin'an Sunrise invested in a filling factory in Kumasi and has captured 36 percent of the Ghanaian market, with plans to expand into the rest of West Africa. To name further examples, Hongda Steel has nearly 3,500 Nigerian employees working in its recycled steel factory and Rebecca Wig has around 900 local employees in Ghana.

#### **D. OPPORTUNISTIC SMALL GEESE, TRAVELING TOGETHER**

THESE MANUFACTURERS USUALLY REMAIN small-scale, cluster together in the same sector or industrial zone, and are often related to each other or have similar regional origins. In Tanzania, one trader from Fujian invested in plastics, opening the first Fujian company in Tanzania. His sister, brother, and the aunt of his son-in-law followed him into the Tanzanian market and today ten out of the 12 Chinese industrialists in the plastic recycling and products sector are from the coastal province of

Fujian. Being related does not necessarily mean that these firms help each other, however. Though they are relatives and friends, price competition remains tied to market forces. People “do not care about familial relationships when it comes to business,” the trader noted when interviewed.

## **E. NOT CHINESE, BUT FLYING GEESSE?**

BRAUTIGAM DOCUMENTED HOW NIGERIAN traders learned about manufacturing processes through site visits to Asian factories.<sup>4</sup> We found several African firms in Nigeria that followed this pattern. In the town of Nnewi, four Nigerian manufacturing firms employed Chinese experts at the time of our study, with a total of 58 Chinese and 8,297 Nigerian workers. Other firms employed Chinese experts for temporary training purposes. Some Nigerian firms also sent staff to China for training when opening new product lines.

We also identified several non-Chinese firms in the leather gloves, shoes, and garment sectors in Ethiopia and Tanzania that moved some labor-intensive production or expanded their global value chains from China to Africa. These investors brought in Chinese trainers and experts to help transfer technology and skills to African workers. In 2009, Mazava, a subsidiary of Winds Group, a global, high-end technical sportswear fabric and garment company, opened a factory in the Tanzanian city of Morogoro, which by 2014 had over 2,000 workers. The Winds Group employed dozens of Chinese specialists to train their Tanzanian workers.

## **CONCLUSION**

IN ETHIOPIA, GHANA, NIGERIA, and Tanzania Chinese manufacturing firms have a significant and growing presence. Chinese manufacturing investors seem to be mainly located in the fabled “missing middle” – neither small, nor large. Yet so far, the firms in our study seem to primarily be replicating the experience of earlier foreign investors. Most are targeting local markets, substituting for imports, and hoping that reduced transportation costs and local knowledge will allow them a higher profit margin. A small but significant group could, perhaps, be seen as the vanguard of the flying geese – relocating to Africa to take advantage of lower costs and integrating African producers into global value chains. But so far, these firms are few and far between.

## **CHALLENGES AND OPPORTUNITIES FOR AFRICA**

### **1. Import Substitution**

OF THE FIRMS WE interviewed, only 42 were producing solely for the host country market, with an additional 10 also exporting only within the region. In most, but not all, of these cases the companies manufactured products that substituted for imported goods. In plastic products, Chinese firms were responding to the slight advantage provided by tariff protections, ranging from a 20% duty in Ghana to 25% in Tanzania and 35% in Ethiopia. These comparatively low protections suggest that local African firms are not taking advantage of the local market potential.

### **2. Adding Value to Raw Materials and Local Inputs**

SOME CHINESE FIRMS WERE ADDING value to raw materials through processing. In some cases they went on to export most or all of the products. We found this pattern among the tanneries in Ethiopia, a Chinese-owned sisal farm in Tanzania, and several textile factories that use local cotton as inputs. Counting scrap steel and waste plastic as “raw materials”, we can also include the steel mills and plastic product factories as “adding value.” Other foreign firms have also invested in these sectors. Yet it is likely that other niche opportunities exist for African entrepreneurs to exploit. We see some trace evidence of this beginning to occur in the Ghanaian plastics sector.

### **3. Power and Transport Infrastructure**

POWER AND TRANSPORT CONTINUE to be challenges for many firms in Africa. Although some Chinese firms have grown large enough to arrange for their own power grids, such as Viju Milk in Nigeria, poor infrastructure ultimately stymied Viju Milk’s plans to expand into Ghana, Burkina Faso, and Togo.<sup>5</sup> To attract more foreign investment and to encourage domestic investors, these infrastructure challenges need to be overcome.

### **4. Technology Transfer and Skill Diffusion**

WE OBSERVED THAT EMPLOYMENT in Chinese factories is significant, with some 20,000 jobs generated by the companies interviewed. This translates into considerable diffusion of skills learned on the job, and the introduction of factory culture as a source of employment for young people, many of whom had likely never worked in factories before.

In Nigeria, we identified considerable technology transfer and training occurring through the market, with African firms contracting with Chinese suppliers to install machinery and train their workers. We also found that although Chinese firms do not yet show many signs of working directly with local suppliers to improve quality, their demand for higher quality inputs have in some cases led to technology upgrades by local firms. This form of learning may prove to be a more enduring phenomenon than inter-firm transfer in a competitive environment.

### 5. Labor Relations and Safety

SOME CHINESE FIRMS ENCOUNTERED safety problems and were non-compliant with local regulations, which in turn led to protests and strikes. For example, in Tanzania, Tooku experienced labor protests in 2014 and a labor strike in late 2015, which might have dissuaded them from further investment. We also received feedback pertaining to local xenophobia toward Chinese workers.

Local workers had their own complaints about safety and Chinese non-compliance with regulations created to provide protections for permanent workers. Hongxing Steel in Nigeria was closed several times for safety and other violations, and was even castigated as a “slave-driver” on Nigerian social media.

### 6. Environmental Issues

IN SOME CASES, CHINESE FIRMS have brought technologies that produce more pollutants to Africa, with Ghana and Tanzania continuing to use plastics that are banned in China. For example, Baoyao Steel in Nigeria bought and imported the physical assets of an old steel plant in Shanghai that had been shut down due to tighter environmental standards.

### 7. Impact on African Firms

BASED ON OUR PRELIMINARY findings, it appears that Chinese firms may be competing more with imports and other foreign firms in country than with African manufacturers themselves. In Ghana, for example, we asked firms about their main competitors. Of the 21 firms that answered this question, only eight mentioned local African firms as competitors, with the rest naming locally-based foreign firms or imports as their main competition. ★

## ENDNOTES

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**THE SAIS CHINA-AFRICA RESEARCH INITIATIVE** at the Johns Hopkins University School of Advanced International Studies (SAIS) in Washington, D.C. was launched in 2014. Our mission is to promote research, conduct evidence-based analysis, foster collaboration, and train future leaders to better understand the economic and political dimensions of China-Africa relations and their implications for human security and global development.

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