

POLICY POINTS

Increase collaboration

between construction sector and vocational training institutions - focusing particularly on increasing hands-on experience..

Strengthen technical and vocational training to include broader occupational skills - allowing enterprises to focus on firm or project specific skills.

Project contracts should include training of local employees as a component and give the contractor correspondingly longer time to complete the project.

Local Skill Development from China's Engagement in Africa: Comparative Evidence from the Construction Sector in Ghana

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OVER THE PAST DECADE, CHINESE ENTERPRISES HAVE MADE significant progress in developing new business ventures in Africa. As of late 2016, the stock of China's foreign direct investment (FDI) in Africa amounted to around US\$40 billion, up from less than US\$1 billion in 2004. China is now Africa's biggest economic partner, with no other country matching the depth and breadth of China's engagement on the continent. China's engagement in Africa, however, has also been controversial. The media, pundits, and policymakers often question whether the presence of Chinese enterprises in Africa contributes to knowledge transfer to host countries, and skill development of local employees. Some claim that by relying on the import of a large number of foreign workers from China, Chinese enterprises contribute little to local skill development and knowledge transfer in Africa. Other researchers suggest that formally owned Chinese enterprises across Africa engage in strong local hiring practices, and that Chinese expatriates in Africa are likely to be skilled workers that provide training to their local counterparts.

Despite the continued and heated debate, there is still no clear evidence as to whether the approaches used by Chinese enterprises in local skill development differ from those used by other foreign entities and local enterprises. Are foreign enterprises from other emerging and developed countries and local enterprises different from Chinese enterprises in terms of promoting local skill development and knowledge transfer in Africa? If so, what is the degree of variation between them? And if not, what main challenges do enterprises face in transferring skills and knowledge to locally hired workers? This policy brief contributes to filling this knowledge gap using survey data collected from 12 enterprises in Ghana's construction sector, of which six are Chinese, three other foreign-owned, and three local.

BACKGROUND

CHINA'S PRESENCE IN AFRICA'S CONSTRUCTION SECTOR is not a new phenomenon. Dating back to the early years of African independence, Tanzam railway linking landlocked Zambia with the Tanzanian coast is one of the most well-known construction projects financed and supported by China. Since then, China's presence in the construction

sector in Africa has continued to increase, and has become a traditional element and major area of China-Africa cooperation. Most recently, the 2018 Beijing Summit of the Forum on China-Africa Cooperation set in a direction to build an even closer China-African community with a shared future in the new era. By the end of 2016, the construction sector had attracted US\$11.3 billion of China's direct investment in Africa, representing the largest share of China's FDI stock on the continent, exceeded the mining sector for the first time.

Ghana's construction sector has grown strongly over the past decade, and has become of increasing importance to its broader economy. According to Ghana Statistical Services, construction activities contributed US\$3.8 billion to Ghana's gross domestic product (GDP) in 2014, up from US\$280 million in 2006. The construction sector, as a share of GDP, also more than doubled over the same period, increasing from 5.7% to 12.7%. As the fourth largest sector in terms of job creation in the economy, the construction sector employs over 580,000 workers across the country. The sector is also highly competitive, with significant foreign and local participation. Foreign enterprises active in the sector include, but are not limited to, those from Brazil, Canada, China, Germany, Israel, Italy, Serbia, South Africa, and the United States.

Foreign participation in Ghana's construction sector has been attracted by two main factors. First, rapid urbanization due to population growth, rural-urban migration, and an expanding middle class has led to increasingly congested cities. This has brought a desire to develop ultra-modern infrastructure. Many construction projects are getting larger and more technically complex, and thus require contractors that have adequate experience, capacity, and technical know-how to undertake such initiatives. Second, project sponsors, financiers, and other stakeholders are increasingly requiring contractors to meet higher technical, safety, environmental, and social standards that were previously often ignored. These standards have increased project complexity and construction costs, making it difficult for local construction enterprises to successfully bid for large projects without the backing of foreign counterparts. It is generally believed that one of the key benefits from foreign direct investment, particularly in developing countries, is the human capital development that accrues in host countries through local skill development and technology transfer.¹

China's "Going Global Strategy" coincided with a period of strong economic growth in Ghana in the early to mid-2000s, during which the government of Ghana undertook a number

of large-scale infrastructure projects, such as roads, hospitals, power plants, and transmission lines. Hence, the country presented an attractive business environment to utilize the excess capacity of Chinese construction enterprises looking for market opportunities abroad. Indeed, Ghana became one of the top African recipients of FDI from China, receiving above 20% of China's FDI flows to Africa in 2016.² There are currently over 20 major Chinese construction enterprises operating in Ghana, including both state-owned and private enterprises, working on various types of construction projects across the country. Not only do these Chinese enterprises compete with other-foreign and local construction enterprises, but they also compete intensely among themselves for contracts.

DATA AND METHODOLOGY

THIS BRIEF RELIES ON SURVEYS conducted through interviews with construction workers and project managers in Ghana in 2016. The strong participation of foreign enterprises in Ghana's construction sector allows for a sizable number of enterprises, both foreign and domestic, from which a random sample can be selected for a reliable comparative study. For comparative purposes, and given that smaller scale projects typically involve limited knowledge transfer and local skills development, this study focuses on formally registered construction enterprises working on projects with a total cost of at least US\$10 million and hiring a minimum of 50 employees on site at the time of the survey. From a total of about 45 construction enterprises that meet the abovementioned criteria, we selected 12 with on-going projects in Ghana.³ This consists of six Chinese enterprises, three other-foreign enterprises, and three local enterprises. For each of the 12 enterprises, we randomly selected 20 employees for an overall sample of 240 employees. Employees in the sample cover a wide range of professions, which ensures the sample is not biased towards employees with a particular skillset or against professions that require more training than others.

The survey specifically entails questions designed to extract information aimed at answering the key indicators including, but not limited to, information on age, technical education background, years of relevant work experience, duration of work with current enterprise, roles and responsibilities in the project, if employees received short-term general training and/or long-term specific training, duration of training received, cost and sponsorship of training, and general perception of usefulness of training for and beyond responsibilities at current enterprises.⁴ In addition to the employee survey, project managers from the

12 enterprises were also interviewed to obtain information on the projects. Project manager interviews capture information on project type, location, total cost, major financier, cost structure, number of employees, whether short-term general training and/or long-term specific training is offered to local workers, duration and cost of training offered, number of training beneficiaries, constraints to local skill development, as well as recommendations on how to facilitate local skill development.

We first compare the characteristics of the sampled construction enterprises and their workforce and proceed to quantitatively examine the heterogeneity in promoting local skill development of local employees through the provision of short-term general training and long-term specific training across the three groups of construction enterprises by estimating a binary choice logit and probit model of an enterprise's decision to train a worker or not of the form. In addition, we identify some key challenges faced by construction enterprises in providing training to local workers.

MAIN FINDINGS

1. There are no significant differences in the characteristics of local employees from Chinese construction enterprises and those from other-foreign and local enterprises in terms of age, marital status, education background, work experience, and union membership, which suggests that local workers employed by Chinese enterprises and other enterprises are from the same domestic labor pool.

2. Similarly, the share of local workers in total employment is also not significantly different between Chinese and other-foreign construction enterprises. Our results clearly show that foreign construction enterprises, including those owned by Chinese, contribute significantly to job creation and local employment. This is contrary to the perception that Chinese enterprises rely on the import of labor from China and contribute little to local job creation.

3. In terms of employment attributes, while workers in other enterprises on average stay longer with their employers than those working for Chinese enterprises, statistically, we do not observe any significant difference in the likelihood of receiving training between local workers in Chinese enterprises and those in other enterprises.

4. Compared to local enterprises, both Chinese and other-foreign enterprises contribute positively to local skill development through the provision of both short-term general training and long-term specific training to locally-hired workers.

5. Indeed, the likelihood of receiving training, especially short-term general training, is higher for local employees working in Chinese enterprise than their peers working in indigenous and other-foreign enterprises.

6. The vast majority of construction enterprises – Chinese, other-foreign, and locally owned firms – identify low technical education quality, low employee retention rate, and tight project implementation time frame as the main challenges in promoting local skills development through training (see Figure 2).

7. Some foreign enterprises also cite language and communication barriers as key challenges that impede local skill development in the construction sector in Ghana.

POLICY RECOMMENDATIONS

1. Both foreign and local enterprises point out that there is a lack of collaboration between the construction sector and vocational training institutions such that many graduates lack the basic skills, particularly hands-on experience, needed on the job that allow enterprises to upgrade their skills. To bridge this gap, enterprises in Ghana's construction sector should liaise with technical and vocational education and training institutions specialized in relevant fields. This will help the institutions better identify skills required by the industry, understand employers' expectations, and improve the design of their vocational training programs. Both Ghanaian and foreign governments could play a role in encouraging and facilitating such collaborations between industries and vocational training institutions.

2. Enterprises have a disincentive to invest in training local employees when they cannot capture those productivity gains due to high labor turnover. The issue could also be partially addressed by improving the quality of technical and vocational education and training, especially training on broader occupational skills. If graduates are well trained and equipped with basic skills, enterprises could then focus mainly on providing them with training on firm-specific or project-specific skills. Workers receiving firm-specific or project-specific training are more likely to stay longer with their employers, increasing worker retention rate.

3. To allow local workers to gain required skills and sufficient experience, a project contract could include training of local employees as a component, and give the contractor correspondingly longer time to complete the project. This is suitable for construction projects sponsored by government agencies and financial institutions with development objectives. For the large number of construction projects involving Chinese

state-owned enterprises and agencies across the African continent, local project sponsors and Chinese financiers and contractors could take the cost and timing of training local workers into consideration when they negotiate project contracts. Foreign construction enterprises, particularly Chinese enterprises, should also develop their long-term strategies to guide their operations in African host countries, including business development and human resource management. Foreign construction enterprises with long-term commitment to local African markets are more likely to develop a strong pipeline of construction projects, and have more incentive to invest in skill development of their local workers who can be deployed across different projects.

4. In addition to efforts made by construction enterprises to bridge the language and communication gaps, both the Chinese government and the governments of African host countries should promote people-to-people and cultural exchanges. Such exchanges can create a favorable environment for China-Africa cooperation, and in some cases help mitigate mistrust that exists between Chinese employers and African local workers. To facilitate people-to-people and cultural exchanges, the quality of basic education should also be improved. For example, foreign languages (mainly English) should be included in the curricula of technical education and vocational training institutions, which is still not the case for many institutions in China and Ghana.

ENDNOTES

1. Maria Maher, "The benefits and costs of foreign direct investment: A survey," OECD Directorate for Financial, Fiscal and Enterprise Affairs' Committee on International Investment and Multinational Enterprises, DAFFE/IME (2001) 21; Theodore H. Moran, Parental Supervision: The New Paradigm for Foreign Direct Investment and Development (Washington D.C.: Columbia University Press, 2001).
2. Report on Development of China's Outward Investment and Economic Cooperation, Ministry of Commerce of China (2017).
3. Not all registered construction enterprises have on-going projects with workers on site that could be interviewed.
4. Ghana's construction sector has two types of training: short-term general training is typically related to occupational safety, health, and environmental and social awareness and long-term specific training is often related to the skill set required by a specific profession, such as stone masonry, welding, plumbing, digital mapping, and surveying.

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