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From Contractors to Investors? Evolving Engagement of Chinese State Capital in Global Infrastructure Development and the Case of Lekki Port in Nigeria

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ABSTRACT

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“From Contractors to Investors?
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This paper introduces and critically analyzes an emerging form of global infrastructure development by China’s infrastructure construction companies, known as “integrated investment, construction, and operation” (IICO). This model has been promoted by the Chinese infrastructure industry, financial institutions, and policymakers in recent years, as a response to the moral hazard problems exposed in the past sovereign loan-based infrastructure engagements, the industry’s need to upgrade, and the global rise of Public-Private Partnerships. IICO can be understood as a form of market-seeking foreign direct investment. Compared to past forms of globalization of Chinese state capital, it has a much more complicated risk profile and less clear pay-off. While Chinese state capital actors are not yet well equipped to manage such new risks, they have been driven to make such attempts by the political pressure to become globally leading firms. A case study of Lekki Port in Nigeria serves to illustrate the challenges in the transition toward IICO. This paper calls for continued attention to this emerging form of Chinese state capital’s engagement in global infrastructure development, especially on how risks are managed and the implications for the relationships between Chinese actors and host country stakeholders.

INTRODUCTION

When measuring China's intensifying economic engagement with the Global South, the scholarly and policy communities have largely focused on China's extension of loans. This creditor-debtor relationship between China and many developing countries has also become a subject of controversy, as "debt trap" accusations continue to frame debates on China's intention and impact in its economic engagements with the Global South—despite numerous studies that have already demonstrated the lack of solid ground for such accusations.¹ Ironically, these debates were taking place while Chinese loan financing in Africa was already in decline. Based on the data collected by Johns Hopkins University School of Advanced International Studies' China-Africa Research Initiative (CARI), loan commitments from Chinese banks peaked in 2013.² The COVID-19 global pandemic since 2020 only accelerated the decline. Recent research found Chinese lending to African governments in 2020 reduced by 77 percent from the 2019 level, which was already the lowest in more than a decade.³ As more African countries went into financial distress in recent years, with several of them in negotiation with China for debt restructuring such as Zambia and Ethiopia, it is expected that China will originate fewer new loans in the near future.

As China stepped back from this bilateral creditor to Africa role, a question to ask is whether China will continue to engage in Africa's infrastructure development—given that Chinese loans have been mostly used to finance infrastructure projects—and if so, how? This paper approaches this question through the prism of the Chinese infrastructure construction industry's overseas expansion. As I previously argued, the primary focus of China's overseas lending on the infrastructure sector is a function of China's policy to support the internationalization of its construction industry, seeing the industry as a strategic vehicle for exporting Chinese labor (in the early years but not so much anymore), industrial products, capital, and technical standards, while at the same time instrumentalizing it for economic diplomacy with the developing world.⁴ The Chinese infrastructure construction industry's need for continual expansion, and the ways the Chinese state may support it, will critically shape how China will continue to engage in global infrastructure development.

An emerging strategy that the Chinese infrastructure construction industry is using for their overseas expansion, which has also received policy endorsement, is the "integrated investment, construction, and operation" (投建营一体化, hereafter IICO). Essentially, it means Chinese companies would move beyond their traditional role as engineering and construction contractors, and become developers and operators of the infrastructure projects too. Compared with China's past overseas infrastructure engagements that overly relied on sovereign loans provided by Chinese financial institutions, IICO hopes to enhance Chinese companies' accountability in the projects they participate in, as well as to push for industry upgrades. It signals a market-seeking type of foreign direct investment (FDI) by China's state-dominated infrastructure construction industry, which can potentially lead to a more embedded presence of Chinese economic interests in host countries.

This paper unpacks the emerging IICO model, with the primary goal to understand why it was prescribed as a strategy for the continued internationalization of China’s state-dominated infrastructure industry, and how likely this model will take hold. Responding to the theoretical “global China” paradigm, this analysis pays close attention to the domestic incentives and pressures that are driving Chinese actors’ overseas behaviors, while being cognizant of the external factors that are constraining or shaping them.⁵ Drawing on primary Chinese sources, including industry journals, policy documents, official yearbooks, corporate financial reports, as well as dozens of interviews with industry insiders located in Africa, China, and elsewhere, I show that IICO’s emergence reflects both a level of responsiveness of the Chinese industry, financiers, and policymakers to problems already exposed in China’s global infrastructure development, and a level of adventurism in how China’s state-owned enterprises (SOEs) approach globalization, as shaped by China’s political and regulatory environment.

The paper is structured as follows. In the second section, I will introduce the background for the emergence of the IICO model, as well as discuss the reasons why it stood out as an anticipated strategy for the Chinese infrastructure construction industry’s continued internationalization. The third section provides a conceptual framework for understanding the risks involved in this new model as compared to other forms of state capital globalization. The fourth section uses a specific case of Lekki Port in Nigeria to discuss the strengths and limitation of Chinese companies in carrying out this model. The fifth section concludes with a discussion on the evolution of Chinese state capital’s engagement in global infrastructure development.

EMERGENCE OF IICO AS A PROSPECTIVE MODEL

Around 2015, the notion of “integrated construction and operation” (ICO, 建营一体化) started to emerge in China’s policy discussions regarding overseas construction and engineering contracting. The gist of the idea is to have contractors extend their service to the operation phase of the overseas projects that China finances. Some of the earliest actions included an “alliance” of leading companies organized in 2015 by the China International Contractors Association (CHINCA) and China Chamber of Commerce for Import and Export of Machinery and Electronic Products (CCCME)—two major industrial associations related to overseas construction and engineering—to pursue ICO projects.⁶ In March 2016, China’s Ministry of Commerce (MOFCOM) and the State-owned Asset Supervision and Administration Commission of the State Council (SASAC) jointly issued a “guideline” on promoting ICO among central SOEs.⁷

While initially the policy only included “construction + operation,” without “investment” in the equation, it soon became clear that without also being the capital investor, i.e., having ownership in the project, the construction and engineering contractors were unlikely to be granted the right of operation. According to a manager at a major infrastructure construction SOE who participated in earlier discussions, “another reason was that China started to promote the internationalization of our own technical standards...If you don’t have a controlling stake in the project, how could you require others to adopt the Chinese standards?”⁸

For these reasons, both ICO and IICO entered policy discussions, with the latter gradually dominating the discussions.⁹ IICO has since appeared in high-level speeches and policy documents. In the 2018 Forum on China-Africa Cooperation summit in Beijing, Chinese President Xi Jinping announced that China would “support Chinese companies in participating in Africa's infrastructure development by way of *investment-construction-operation* or through other models” (emphasis added). In a 2019 guideline jointly issued by China's 19 ministries or government agencies promoting “high-quality development” of China's international project contracting industry, IICO and ICO were specifically mentioned as ways for companies to forge “new advantages.”¹⁰

In this sense, IICO marks a partial shift in China's global infrastructure engagement from export-based to foreign direct investment-based activities. In the past EPC+F model (Engineering-Procurement-Construction plus Finance), the Chinese infrastructure industry was essentially exporting its engineering and construction services, and through that service provision, exporting China's industrial products (equipment and machineries, and to some extent materials and basic supplies such as steel). Through IICO, China's infrastructure industry is now seeking to use equity investment to sustain such exports. In this sense, the nature of China's overseas infrastructure engagements shifts from an export to a market-seeking type of FDI.

Like many other ideas in China, IICO provides a new framework for practices that already exist. When the notion of ICO/IICO was first being discussed in 2015, Chinese researchers had already identified over 200 overseas projects that could be put into the category.¹¹ These earlier projects were mostly power generation projects in the form of Build-Own-Transfer (BOT), as they involved the contractor setting up a project company with their own capital, building the project, and owning or operating the project for a period before transferring back to the host government. In fact, the power sector is where a lot of FDI from Chinese companies has already taken place: according to Boston University's China Global Power Database, 11,830 megawatts in power generation capacity outside China has been put in place or in the pipeline that involves FDI from Chinese companies.¹² This is because power generation projects are relatively more “bankable,” as it is easier to model the future revenue once the generation capacity and unit price are known, unlike in other sectors such as transportation or mining where many parameters are hard to predict.¹³ But such BOT projects have mostly been located in Southeast Asia, which can be explained by the geographic and cultural proximity with China. One of the earliest overseas Chinese BOT projects was the Kamchay dam in Cambodia built by Sinohydro, which was initiated in 2006 and went into operation in 2011.

In response to problems already exposed in China's global infrastructure development, the current call for IICO is distinguished by a more conscious integration of financial and industrial capital to facilitate the continued internationalization of the infrastructure industry. The remainder of this section identifies three reasons: 1) Chinese financial institutions' realization of the moral hazard in their past lending practices that have benefited the global expansion of the Chinese infrastructure construction industry; 2) the push for industrial upgrading; and 3) the rise of Public-Private Partnership (PPP) as a way to address global infrastructure development needs.

1) MORAL HAZARD IN THE OLD PRACTICE

EPC+F has been the most important form of contracting through which Chinese infrastructure construction companies have expanded globally in the past decade. The availability of Chinese loans, especially concessional and preferential loans provided by Export-Import Bank of China (Eximbank), has been a critical source of Chinese infrastructure construction companies' competitiveness to win contracts. Given the huge gaps between Africa's infrastructure needs and the availability of financing sources, a contractor's ability to secure financing is often more important than their engineering capabilities or cost advantage.

Compared to multilateral lenders, Chinese loans are distinguished by their size. The average size of Chinese loans to Africa's information and communications technology (ICT), power, and transport sectors—three main infrastructure sectors that Chinese companies are active in— from 2000 to 2020 was around US\$ 165 million.¹⁴ In comparison, the World Bank's loans to Africa in the comparable sectors in the 2000-2021 period had an average value of US\$ 1.86 million.¹⁵ Projects financed by Chinese loans also tend to be more profitable compared to those financed by multilaterals or local government budgets, due to lower level of competition (China's banks typically only lend to projects employing large Chinese SOEs, or occasionally exceptional private companies), more timely payment, and low exchange rate risks (compared to projects paid from local government budgets where payment delay is common and local currency depreciation frequently occurs). This is why Africa, a major destination of Chinese concessional loans, has been the profit center for leading Chinese infrastructure companies among overseas markets.¹⁶

However, the finance-driven EPC+F contract has inherent moral hazard. Driven by their interest to win more contracts, companies may gloss over risks and overstate a projects developmental impact. While banks may have the research capacity to assess country- and sector-specific risks, they often lack on-the-ground insight about project-specific risks, which they then have to rely on the companies for information.¹⁷ This explains why many infrastructure projects financed by Chinese banks and contracted to Chinese companies ended up being wasteful investments that failed to generate expected income for the borrowing countries while adding to their financial burden. As a seasoned manager at a major Chinese company readily admitted: “many infrastructure projects were just built to be sunbathing,” meaning that they are lying idle.¹⁸ This inconvenient truth makes “debt trap” accusations toward China's lending practices hard to extinguish, however distorted they are from the actual series of events.

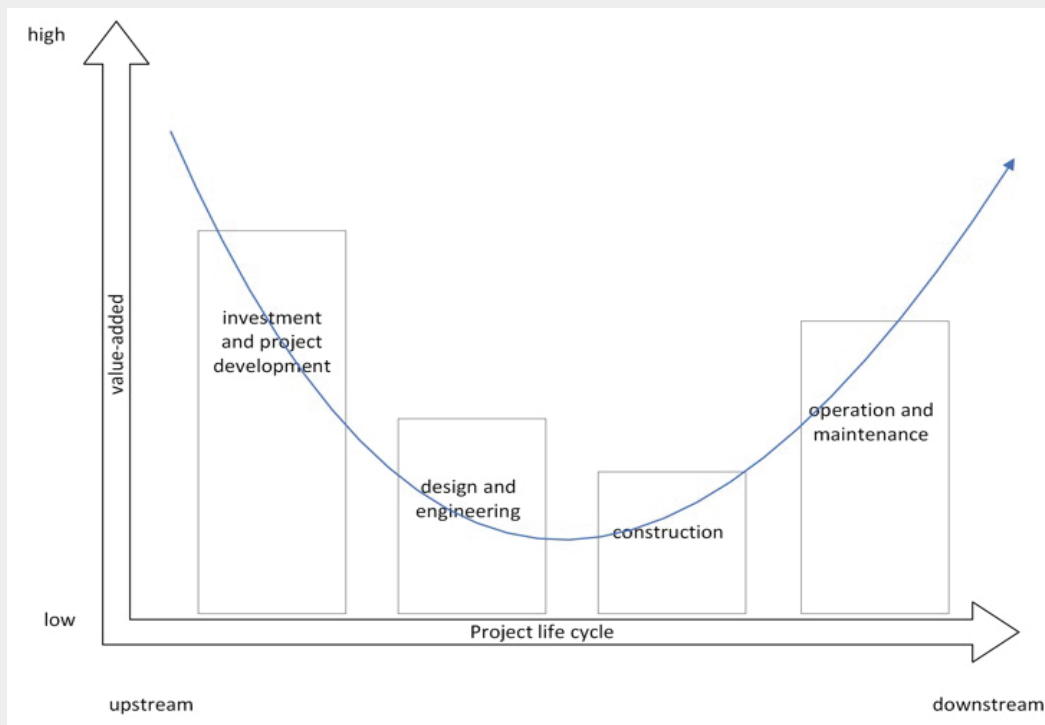
The cut back on loans to Africa since 2013 discussed in the beginning of this paper therefore partly reflects the concern of Chinese financial institutions about the poor performance of many projects they had financed, which was starting to affect the borrowing countries' ability to repay the loans as well as China's reputation. According to the Chinese companies I interviewed, there is a perception that it was much easier to have their loan requests approved by the Eximbank in the late 2000s and early 2010s, when banks were also rushing to expand their lending portfolios; but Eximbank later became more selective, demanding that companies demonstrate the economic viability and developmental value of prospective projects.

To address moral hazard problems, Chinese financial institutions started to urge Chinese companies to take responsibility in the operation of the infrastructure projects they were contracted to build. A known example is the Kribi Port (Phase I) in Cameroon, completed in 2014 and operational since 2018, which was financed by China Eximbank and contracted to China Harbour Engineering Company (CHEC) for construction. The Cameroon government initially intended to award the operation of the port to a consortium between two French companies, but upon Eximbank's demand that CHEC also participate in the operation, CHEC joined as a minor shareholder in the port operation joint venture.²⁰ A 2018 article by an employee of a major Chinese infrastructure construction company reported that Chinese banks required Chinese contractor's involvement in *both* construction *and* operation as a prerequisite for lending to overseas railway projects.²¹ Eximbank has included supporting IICO in its Five-Year Plan for 2016-2020, and has been restructuring its internal departments to reflect the new need.²²

2) INDUSTRIAL UPGRADING

Meanwhile, the Chinese infrastructure construction industry realizes that it is time for them to upgrade from their current low value-added role. Industry insiders commonly use a “smiling curve” to describe their position in the value chain (Figure 1): engineering and construction are located in the middle of the project cycle and the bottom section of the curve in terms of value-added; project development and investment, and operation and maintenance, are both more profitable, which Chinese companies aim to extend their businesses to.

Figure 1: Infrastructure Development Smiling Curve

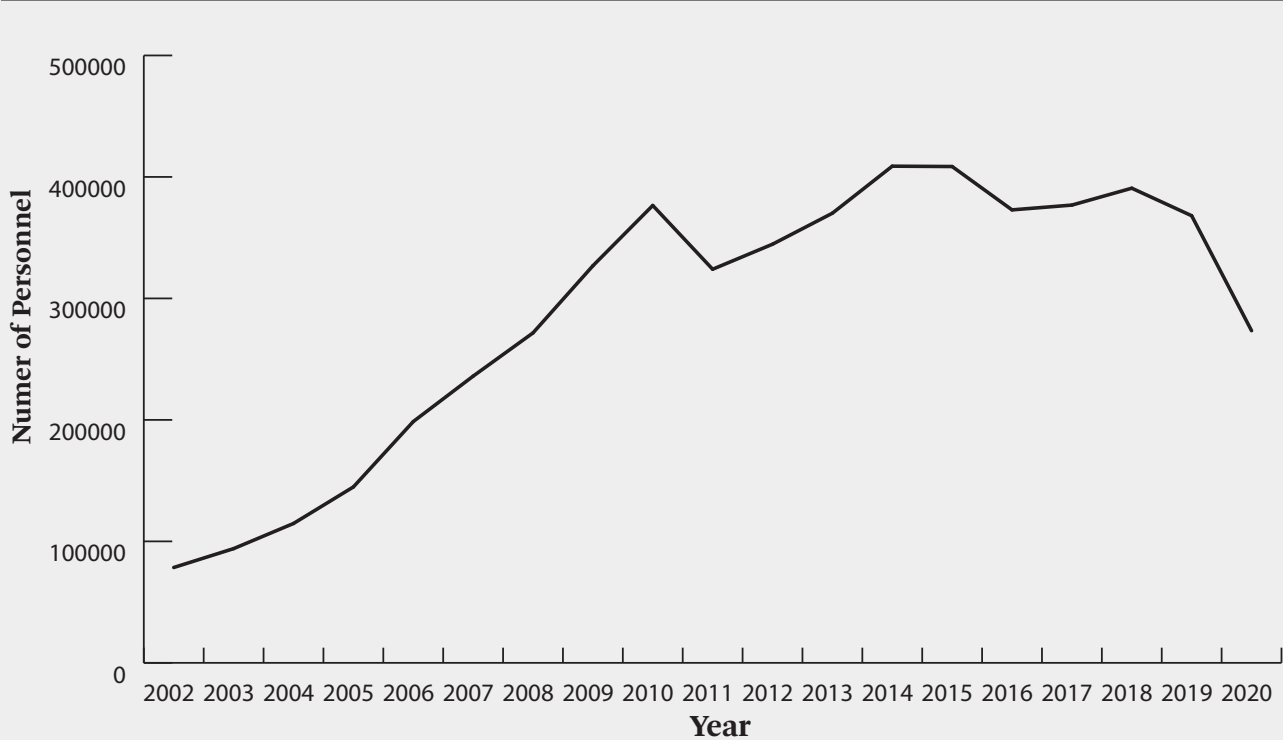


Sources: Adapted from interviews by author.

The lower profitability of engineering and construction contracting has been exacerbated by the over-competition among Chinese companies themselves, especially when more companies were mobilized to go into overseas markets under the Belt and Road Initiative. Figure 2 shows the number of

personnel working in overseas project contracting from 2002 to 2020, which can be a rough proxy for the number of companies active in overseas markets. Throughout the 2010s, there were six to eight times more personnel than 2002 levels. A telling example is Gabon, a country of 2.3 million people: by 2018 there were at least 15 major Chinese infrastructure construction companies active in the country, although the number reduced to seven by 2021.²³

Figure 2: Personnel Working in Overseas Project Contracting by Year



Sources: China Trade and External Economic Statistical Yearbook.

The level of competition is so high that even subsidiaries from the same parent group compete with one another. China's leading construction and engineering companies are predominantly central SOEs, which are typically organized as group companies with subsidiaries based in different parts of China. This is a legacy from the companies' pre-reform predecessors as central or regional bureaus affiliated with line ministries (such as ministries of railways, communications, or power generation), which were responsible for infrastructure construction in their respective jurisdictions. These subsidiaries, known as the "engineering bureaus," are where most of the engineering capacity of the group companies is housed, whereas the parent group serves more as a holding company and strategic decision-maker. It is then unsurprising that even subsidiaries of the same group compete with one another in overseas markets, given their similar capacities, especially when their parent groups don't have strong regulations to govern their geographic division of labor. According to a manager at a large central SOE group, the BRI also caused more subsidiaries of large SOE groups to go overseas than otherwise would have happened: having the best engineering capacity in China, these central SOE subsidiaries have been hired to fulfill overseas contracts by external Chinese companies who don't have such engineering qualifications but have the business connections to land contracts. The latter are often companies affiliated with

China's provincial governments who need to show their efforts towards internationalization and to abide by the BRI mandate.²⁴ Therefore, the numerous subsidiaries of China's large SOE groups have been driven by decentralized interests not necessarily associated with their parent groups in their overseas ventures, which creates additional challenges for regulating the competition.

3) RISE OF PPP IN GLOBAL INFRASTRUCTURE DEVELOPMENT

The discussion of IICO also mirrors the rise of Public-Private Partnership (PPP) in infrastructure development around the world. Bringing in private capital for infrastructure projects, traditionally an arena of public investment, has been a response to inadequate fiscal capacity in developing countries and has also actively been encouraged by multilateral development agencies.²⁵ World Bank has records of 586 projects with private participation that reached financial closure between 1990 and 2021, located across 45 sub-Saharan African countries.²⁶ It is in this context, then, that Chinese infrastructure construction companies are responding to rising demands within their main equity investment target market. “What we contractors are after is the realization of projects, so whatever is missing, we make it up. This is why we start to move to new areas of service [such as providing equity investment].”²⁷

It is important to note the rise of PPP within China itself, as it has given Chinese infrastructure construction companies—for whom the domestic market still accounts for the majority of their revenue despite their rapid internationalization in the past decades—a foretaste of what they are seeking to do overseas. Between 2014 and 2021, China invested in 7,683 PPP projects with a total investment of 12.8 trillion *yuan*.²⁸ Not unlike the fiscal issues behind the push for PPP in other countries, the rise of PPP in China was in response to the (implicit) debt accumulation by local governments in their infrastructure investment drives; therefore, policies encouraged “societal capital” to participate in infrastructure development to ease the direct fiscal burden of local governments.²⁹ However, a characteristic of PPP in China is that very little “private” capital is confident enough to enter such partnerships with the local governments, or has good enough access to financing. Instead, SOEs, particularly those in the infrastructure construction sector, end up being the main participants in China's PPP projects. In terms of investment value, statistics show that 90 percent of the PPP projects (or 64 percent in terms of number) in 2020 were awarded to SOEs.³⁰

While there is a lot of doubt about the long-term risks of these PPP infrastructure projects, for the time being, including investment and operation as part of infrastructure projects seems to have boosted the profitability of construction SOEs. For example, China Energy Engineering Corporation reported a 27.09 percent gross profit margin for its “investment and operation” business in 2021, as compared to 8.5 percent for “engineering and construction,” the traditional business area. Power Construction Corporation of China (PowerChina) similarly reported 40 percent and 10.92 percent for its investment-operation and construction businesses, respectively.³¹ In 2021, China Communications Construction Company (CCCC) reported that the infrastructure projects it invests equity in accounted for 19 percent of all the new construction contracts it signed in that year.³² These companies' domestic shift toward an investment-driven model has informed their strategy for overseas expansion. As an executive at an overseas project said, “You have to

understand that our group has been doing investment projects for many years, so why can't we do it overseas?"³³

Reflecting the new needs, China's major state-owned infrastructure construction companies have been setting up new subsidiaries dedicated to overseas investment (see Table 1).³⁴ PowerChina and CCCC are among the early movers, both having set up overseas investment arms in 2012. PowerChina Resources Limited, the formers' overseas investment arm, reported in 2021 that in the nine years of the company's existence, their investments enabled nearly 37 billion *yuan* in exports of engineering and construction, procurement, and maintenance services for 32 subsidiaries of their group company.³⁵

Table 1: Overseas Investment Arms of China's Infrastructure Construction "National Champions"

| Infrastructure Construction "National Champion" | Overseas Investment Arm | Year Established | Registered Capital (in billion yuan) |
|--|--|------------------|--------------------------------------|
| Power Construction Corporation of China (PowerChina) | PowerChina Resource Limited | 2012 | 5.41 |
| China Communications Construction Corporation (CCCC) | CCCC International Holding Limited | 2012 | 1.92 |
| China Railway Engineering Corporation (CREC) | China Railway Group Investment (Hong Kong) Limited ³⁶ | 2012 | N/A |
| China Energy Engineering Corporation (Energy China) | China Gezhouba Overseas Investment Co., Ltd. | 2016 | 5 |
| China Railway Construction Corporation (CRCC) | CRCC International Investment Co., Ltd. | 2019 | 3 |
| China State Construction Engineering Corporation (CSCEC) | CSCEC International | 2021 | 3 |

Source: Compiled by the author based on information from company websites and financial reports.

To conclude this section, IICO emerged as a prospective model for the Chinese infrastructure industry's continual internationalization as a result of both "push" and "pull" factors. IICO was "pushed" by Chinese financial institutions' and policymakers' demand for companies to take greater responsibility in ensuring the quality of overseas projects financed by Chinese capital; it was also "pulled" by host countries' demand for direct investment in infrastructure projects, as well as perceived higher profitability of investment activities in the Chinese companies' domestic experience.

IICO: ENTREPRENEURISM OR ADVENTURISM?

How, then, has IICO been implemented since the idea was proposed in 2015? Public statements by officials at China Export & Credit Insurance Corporation (Sinosure) —China's policy agency

providing insurance for export and outward investment – disclosed that the agency had provided insurance for 221 overseas IICO projects by the first half of 2021, with a total US\$ 56.3 billion investment value.³⁷ This does not cover all IICO projects as there are known cases where Sinosure coverage was not required, but it is likely to represent the majority of them since Sinosure coverage is typically required by Chinese banks in lending into high-risk countries – where most of China’s infrastructure development projects are located.³⁸ Comparing this figure to the US\$ 1,135 billion in total overseas contracting revenues between 2015 and 2021, it appears that the transition to IICO has been slow.³⁹ Furthermore, the self-reported number of IICO projects may also have been inflated, as companies may stretch the concept and label their less qualified attempts as IICO, just to appear to be making such efforts -- for example by participating in international consortiums as minority shareholders, with the condition that they are awarded the EPC contract. But while this method may enable companies to secure new contracts that would allow them to recoup their modest equity investment quickly, it does little to help companies move up the value chain and transform themselves into developers, which is IICO’s core purpose.

This section discusses why the transition toward IICO is not easy. I argue that IICO represents a qualitatively different risk profile that Chinese state capital actors are not well equipped to manage.

1) GREATER RISKS, LESS CLEAR PAY-OFF

To illustrate IICO’s risk profile, I compare it with two other forms of globalization of Chinese state capital that have become prominent and received a lot of attention in recent years: sovereign loan-based overseas infrastructure engagements, and asset-acquiring types of outward investment. Compared to the loan-based infrastructure engagement, the risks are more difficult to contain; compared to the asset-acquiring FDI, the pay-off, or anticipated benefit, is less clear.

Table 2: Risks and Pay-Offs for Different Types of State Capital Globalization

| | | Risks | |
|----------|---------|--|---------------------------|
| | | Contained | Diffused |
| Pay-offs | Clear | N/A | Asset-acquiring FDI |
| | Unclear | Sovereign loan-based infrastructure engagement | Market-seeking FDI (IICO) |

Given its FDI nature, it is easy to understand that the IICO model requires Chinese entities (including both infrastructure companies and financial institutions) to take greater risks compared to what they would in the old EPC+F model. As discussed earlier in regards to moral hazard, the contractors’ risks were “capped” in the EPC+F model: while contractors still needed to deal with risks associated with the execution of the contract, they were largely covered from payment risks, since they received direct payments from Chinese banks as long as they executed

the projects according to pre-defined schedules and conditions; once the construction of the project was completed and delivered, they were no longer liable.

In the IICO model, the company would not only be responsible for the construction of the project, but also the operation. This exposes them to a multiplicity of risks for a much longer period of time. While construction of infrastructure projects may take a few years, concession periods for the operation of infrastructure projects typically last a few decades; during this time, the project can suffer from a range of problems from mismanagement, political instability, or regulatory hurdles. Furthermore, operation is crucial for the initial investment to yield positive returns, as construction is low profit, which was the reason why Chinese companies sought the IICO model, as explained earlier. In other words, IICO turns the traditional business model of Chinese infrastructure construction companies on its head: rather than seeking to earn profit from the construction, which now becomes the least important part of the project life cycle, they now hope to earn money from operation, but this is a line of business they have little experience with.

Of course, IICO will not be the first instance of FDI by Chinese SOEs. There have been plenty of outward investment deals by China's SOEs in the past, from the acquisition of natural resource assets by China's energy or mining SOEs (e.g., China National Overseas Offshore Corporation's acquisition of the Canadian oil and gas company Nexen and Aluminum Corporation of China's (failed) attempt to acquire Rio Tinto) to acquisitions of companies possessing desirable technological capabilities or a strategic niche in the global value chain (e.g., China National Chemical Corporation's acquisition of Syngenta, the Switzerland-based seed and biotechnology agribusiness). The literature on state-owned multinationals has focused on this type of asset-acquiring FDI, partly in response to concerns about unfair competition brought about by the rise of state capitalism, since SOEs have access to subsidized finance and are backed by powerful states.⁴⁰

IICO as a type of export market-seeking FDI, by contrast, has far less certain pay-offs. Asset-acquiring FDI tends to be motivated by clearly identified – sometimes urgent – needs of the domestic economy, and attaining ownership can already help assuage the sense of insecurity. IICO's pay-offs, however, will take much longer to manifest and still depend on a number of endogenous and exogenous factors. Importantly, this is because IICO projects will largely be *greenfield* investment, meaning that they involve building the project from scratch, rather than acquiring something that has been built (and thus whose value has been tested, or at least partly so).

Such focus on greenfield investment is determined by the path dependency of the infrastructure *construction* industry, for which the opportunity to *build from scratch* is essential. As a manager explains: “We have dominated the middle part of the smiling curve [construction] because of our cost advantage, but now as we extend to the higher value-added investment and operation, we cannot let go of the construction, because it provides a lot of jobs.”⁴¹ In this sense, the Chinese SOEs' pursuit of *industrial upgrading* is compounded by the necessity for *industrial preservation* too, as they are constrained by their mandate to provide employment.

This distinguishes the Chinese infrastructure companies from many Western competitors which nowadays opt to go “asset-light,” meaning that they would not invest in the actual construction of new infrastructure facilities and own the “heavy” physical asset, but would rather focus on providing service as operators or consultants.⁴² In this sense, engaging in IICO in greenfield infrastructure development is a niche Chinese construction SOEs found in the sector, albeit a more risky niche that other competitors have tended to avoid. The “comparative advantage” for Chinese SOEs to operate in this niche is, in turn, the possibility to mobilize China’s state capital, as greenfield infrastructure development aligns with the kind of image China seeks to project as an enabler of infrastructure development and industrialization for the Global South, as seen in China’s proclamations for Sino-African Cooperation, for example.⁴³

2) TESTING THE RISK-TOLERANCE OF CHINESE STATE CAPITAL

Given IICO’s more complicated risk profile, it may be testing the limit of the “patience” and “risk-tolerance” of Chinese state capital in its globalization drive. The literature on state capital generally holds that state capital has a much longer time-horizon, unlike private capital that must respond to more immediate demands for profit from shareholders, and that the state as a sovereign entity has more leverage than private actors to handle risks.⁴⁴ However, such “patience” and “risk-tolerance” are not unconditional; they are conditioned by how risks are calculated and managed by state capital managers.

To begin with, risk management in the old EPC+F model has been partly politicized. Because the lending in EPC+F was typically in the form of a sovereign loan (the host country government is the borrower or provides a guarantee for the loan), sovereign credibility provided the basis for such risk management. This way, Chinese financial institutions were at least partly sheltered from the repayment risks associated with the economic viability of the projects *per se* (even though poor economic performance and social and environmental impacts do affect their reputation), and instead count on the fiscal capacity and political willingness of the borrowing government for loan repayment. In other words, project-level risk identification was partly substituted for a reliance on macro-level indicators of the country’s fiscal health and perception of the soundness of bilateral political relations (at least in the case of concessional and preferential loans). To help alleviate the risks in their unsophisticated lending, Chinese banks have resorted to a range of credit enhancement measures, including guarantees, collaterals, special reserve accounts, and cross-default clauses, which have also been the subject of controversy related to Chinese lending.⁴⁵

A risk management strategy based on political underwriting would be less applicable in IICO. First, IICO would likely *not* involve sovereign loans—indeed, the fact that many countries are reaching their limits for borrowing is a direct factor that spurred IICO.⁴⁶ The entity that assumes debt liabilities now shifts from the host government to the project company set up by the investor (Chinese company) to manage the project’s investment and operation. There are two possible ways to lend to such project companies: either the loan is guaranteed by the investor (parent company of the project company), or loan repayment is entirely based on the future revenues of the project, with the investor providing limited or no guarantees (known as limited- or non-recourse project financing). Therefore, instead of managing the financial relationship with a foreign government,

now the issue becomes how the risks are shared between the Chinese infrastructure companies (investors) and financial institutions: non-recourse or limited-resource project financing would place more risk burden on the financial institutions, while investor-guaranteed lending would do so on the infrastructure companies.

Either side seems to be trying to shovel more risk onto the other. On the one hand, if the project were located in a country that is already considered highly indebted and thus no longer eligible for sovereign loans from Chinese banks, Chinese banks would also refuse to do non-recourse or limited-recourse project financing.⁴⁷ This can be understood as a way for financial institutions to avoid adverse selection caused by the moral hazard discussed earlier. On the other hand, for the investor to provide a guarantee, it would assume great financial liability throughout the duration of the loan, and providing a guarantee would increase the company's debt-to-asset ratio, which is already very high among China's infrastructure construction SOEs.⁴⁸ Imposed by the Chinese government, reducing the debt-to-asset ratio has been one of the top imperatives for these SOEs.⁴⁹ "It's hard to do project financing from Chinese banks, because they tend to have high requirement for guarantee, usually provided by the parent companies. But because of SASAC's requirement on debt-to-asset ratio, this wouldn't work [for most cases]," according to a manager at a major infrastructure company.⁵⁰

Therefore, paradoxically, while IICO would mean shifting the counterpart from foreign governments to Chinese companies (or entities directly under their control), the Chinese system becomes less ready to handle the financial risks. This is not surprising, as the Chinese infrastructure industry seeks to move to a more profitable position along the value chain, the system as a whole will have to take on more risks. It is not clear, however, to what extent China's state capital can tolerate IICO's intensified risks, especially in such high-risk markets as Africa. Contrary to assumptions about the higher risk appetite of state capital, there are a number of risk-containing measures institutionalized in China's state capital management, such as the debt-to-asset ratio caps for the SOEs mentioned above. Another risk-containing measure is the 2016 regulation by the State Council that holds SOE leaders accountable "for life" for investment decisions they make during their tenure, meaning that even after an executive retires or moves to a new position, they would suffer disciplinary consequences if an investment made under their watch went wrong.⁵¹ Such regulations have made SOE leaders reluctant to take on inherently risky outward investment decisions.⁵² The IICO strategy is also not without dissent from within the industry itself. For example, a senior manager at a major infrastructure company publicly expressed the view that IICO involved "related party transactions" between the subsidiaries of the same company taking part in investment, construction, and operation, which brews risks that cannot be easily resolved by a company's internal controls.⁵³

How then, do we explain the apparently high level of endorsement for IICO among the Chinese infrastructure industry, financial institutions, and policymakers? I argue that a large part can be attributed to the political pressure Chinese SOEs are under to become "world-class" enterprises, which requires them to become internationally competitive players in their respective sectors. To "cultivate world-class enterprises" was first launched as a goal during China's 12th Five-year Plan

period (2011-2015), when the SOE regulators laid out five areas and 25 indicators for SOEs to appraise the gaps in their capabilities, among which is the ability of international business operations.⁵⁴ The goal of “world-class” enterprises has been driving China’s SOE reforms in the past decade.⁵⁵ In recent years the pressure has intensified, with the latest political guideline of “accelerating the development of world-class enterprises” issued in February 2022, by Xi Jinping in his capacity as the General Secretary of the Chinese Communist Party during a meeting of the Central Comprehensively Deepening Reforms Commission, a top political deliberation body for China’s governance issues.⁵⁶ One thing the SOEs have been instructed to do is benchmark themselves against world leaders in their sectors, or *duibiao*.⁵⁷ The French company Vinci has frequently been cited as a benchmark for construction SOEs, and the fact that Vinci is renowned with its two pillars of business -- engineering and construction contracting on the one hand, and concession (i.e., operation of infrastructure projects) on the other, reinforces the notion that IICO is the way to go.⁵⁸

IICO involves high risks that Chinese actors are not well equipped to handle, but this has not prevented IICO from being promoted as a prospective model for the industry’s continued internationalization, due to political mobilization for SOEs to become globally leading firms. As a strategy for industrial development, optimists see IICO as entrepreneurial while pessimists would characterize it as adventurist. Therefore, whether or not IICO investment decisions are made largely depends on the level of risk preference and commitment to internationalization of a company’s leadership.⁵⁹

LEKKI PORT: EXTERNALLY DEPENDENT SUCCESS?

Having discussed the risks involved in IICO, this section turns to a specific case to illustrate the challenges. Located in Nigeria, Lekki Port is the first overseas IICO port project by China Harbour Engineering Company (CHEC) and its only IICO project in Africa. CHEC is a construction SOE with prominent market shares in global port construction. Entering Africa in the early 1980s, CHEC had established 25 branch/subsidiary companies in Africa by 2020 and built at least 13 ports in Africa.⁶⁰ Its parent group, China Communications Construction Corporation (CCCC), has been consistently ranked China’s largest international contractor (in terms of overseas contracting revenue) by the global construction industry publisher ENR, and among the world’s top five since 2015.⁶¹ Both CCCC and CHEC are considered frontrunners in this new drive toward IICO. We would have expected CHEC to have one of the strongest capabilities to conduct IICO among Chinese companies in Africa.

However, as this section will demonstrate, the realization of IICO in the Lekki Port case was due to circumstances that may not be easily replicated elsewhere. Critically, the realization of IICO in this case has depended on the willing collaboration of other international actors, whereas CHEC’s core ability for successfully launching an IICO project remains untested.

1) A MUCH-NEEDED PORT

Lekki Port has been touted as a “game changer” for Nigeria. Located 40 miles to the east of Nigeria’s economic capital Lagos, Lekki Port will be Nigeria’s first deep seaport and one of the largest in West Africa thanks to its 17-meter draught. It is a key piece of infrastructure that Nigeria has been eagerly anticipating. The two existing terminals in Lagos, Apapa and Tin Can Island, are both shallow in their depth and

unable to receive large container ships. As a result, large ships often need to call on ports in neighboring countries before the cargo can be trans-shipped to Nigeria with smaller vessels. To make things worse, both terminals are located too close to the downtown area, and the resulting difficulty in expanding access roads to the terminals has led to long cargo evacuation delays. Trucks spend days on nearby roads waiting to pass, which exacerbates Lagos's already notorious traffic problems and makes Nigeria's shipping costs one of the most expensive in Africa.⁶² Port congestion is estimated to cost US\$ 55 million *per day* for the Nigerian economy.⁶³

Lekki Port is anticipated to be the solution to this shipping malaise. It has a designed capacity for US\$ 1.2 million twenty-foot equivalent unit (TEU) per year for the first phase, equivalent to 80 percent of Nigeria's container port throughput in 2020.⁶⁴ There are also high hopes for its contribution to the Nigerian economy: the Nigerian government estimates that Lekki Port will create 17,000 jobs, bring US\$ 201 billion in revenue to federal and state governments during its 45-year concession period as well as another US\$ 158 billion in direct or indirect business.⁶⁵ Seeing the project's potential popularity with the public, Nigerian politicians have made frequent visits to the port, including the former Minister of Transport Rotimi Amaechi and President Muhammadu Buhari, especially in the runup to Nigeria's general election in early 2023. The construction of the port was completed in October 2022, with operation set to commence in early 2023.

While Lekki Port was branded as a "key achievement project" in China's second Belt and Road Summit in 2019, it was not the result of any inter-governmental collaboration between China and Nigeria. It is partly financed by a loan from China Development Bank (CDB), but the borrower is the project company set up to develop the port - Lekki Port Investment Holdings - in which CHEC is the majority shareholder. Thus, the loan is not a sovereign loan, and in contrast to concessional loans provided by China Eximbank, CDB loans do not require inter-government framework agreements.⁶⁶ "The Lekki Port project has been outstanding among BRI projects exactly because it is less political, and so it has been less targeted [by critics of China's global infrastructure engagements]," an executive at the company remarked, highlighting the commercial nature of the project.⁶⁷

2) CHEC: CONTRACTOR-TURNED-INVESTOR

CHEC did not initiate the Lekki Port project. Its original developer was Tolaram Group, a family business currently based in Singapore started by an Indian businessman. As a foreign company, Tolaram is very well known in Nigeria because of the instant noodles that it markets, a popular household food item.

It was more or less a coincidence for Tolaram, a company mostly in the consumer goods business, to undertake this major infrastructure project. Back in the late 1990s, Tolaram originally envisioned building a jetty for its goods in Ibeju Lekki. During negotiations, the Nigerian authorities also came to realize that the same area had been previously marked by the British colonial government as a potential site for a seaport. The Nigerian government and Tolaram quickly moved to discuss the possibility of building a port in the early 2000s, but at that time, Nigeria didn't have any legal framework that would allow private investment and ownership of a

port. It only became legally feasible after Nigeria passed the Infrastructure Concession Regulatory Commission Act in 2005, which set out the institutional framework for a PPP. Lekki Port is therefore the first PPP port project in Nigeria. The negotiations between the Nigerian government and Tolaram took quite a few years to conclude due to the legal ambiguity, and a concession agreement was reached in 2011.⁶⁸ Tolaram's continual engagement in this project was motivated by its plan to support the Lagos Free Zone located right in front of the port site, where Tolaram is also an investor.⁶⁹

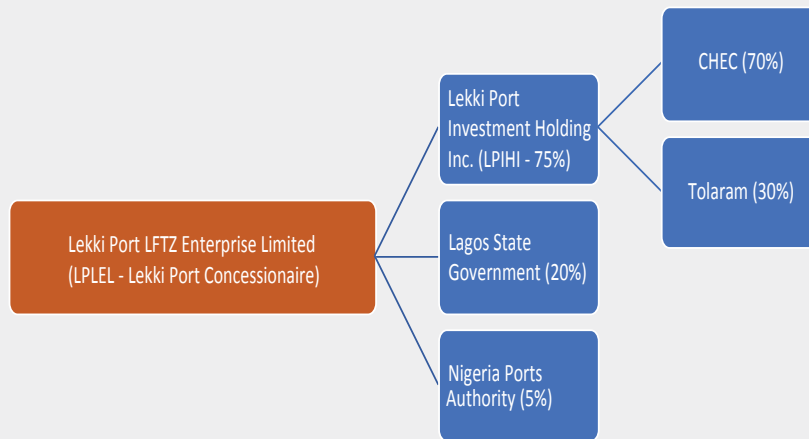
CHEC's involvement in the Lekki Port project began in 2012, when it was selected by Tolaram to be the EPC contractor. Construction of the port could not proceed, however, due to Tolaram's failure to secure financing, as potential lenders had doubts over the port's business forecast and in Nigeria's economic prospect in general. The Filipino port operator ICTSI, which was originally part of the consortium, also withdrew. Tolaram managed to retain the concession rights despite its failure to fulfill contractual obligations within the stipulated timeframe.

According to an official at the Nigerian Ports Authority, "The initial funding was going to come from a consortium of Stanbic IBTC bank, African Development Bank (which was taking the lead) and European Investment Bank. But negotiation didn't go through. They were involved until 2017-18. Lenders came in and negotiated their common framework. But because EIB required political conditions, such as needing to prepare a sanctions list, it took too long, then the lender fatigue kicked in, so we wasted too much time."⁷⁰

It was in the context that, in 2017, Tolaram and CHEC started negotiating to have the latter step in to provide equity investment. CHEC could immediately help optimizing the investment structure by reducing the EPC cost—initially as the EPC contractor, CHEC had proposed a larger budget; but now as an investor who was to pay for the EPC contract themselves, they managed to cut unnecessary components and reduce the construction cost significantly.⁷¹ This episode illustrates one of the strongest arguments for IICO—being the investor and construction contractor at the same time serves to economize the cost of construction. But it also points to the potential tension between the contracting and investing arms of the same company in the IICO model, due to opposing incentives.

Negotiations eventually concluded with an arrangement in the shareholding structure shown in Figure 3. CHEC holds 70 percent of the shares in the Lekki Port Investment Holding Inc. (LPHIH), with Tolaram holding the remaining 30 percent. LPHIH, in turn, forms a joint venture together with Lagos State Government and Nigeria Ports Authority, with a 75-20-5 split. This joint venture, Lekki Port LFTZ Enterprise Limited (LPLEL) is the concessionaire of the Lekki Port project with a 45-year concession period and preferential right for a 25-year renewal. Overall, CHEC enjoys a 52.5 percent control of the LPLEL. This makes Lekki Port the first project in which CHEC holds a controlling stake in Africa.

"It is good to have [CHEC] as an investor, as it is also a risk mitigating measure for us," commented an official at Nigerian Ports Authority. "Because if they fail the project, they lose the equity."

Figure 3: Lekki Port Shareholding Structure

Sources: Author.

However, the other shareholders were concerned about CHEC's intention to build the port and operate it as well. "Tolaram and the Nigerian shareholders demanded the operator to be different. It needs to be balanced." Such a comment from the official at the Nigerian Ports Authority suggests that the IICO model is likely to raise new controversy as Chinese SOEs become deeply entrenched in key infrastructure projects.

Ultimately, the port operator did change and ended up with a different entity, with CHEC a minority shareholder. CMA Terminals, subsidiary of the French shipping conglomerate CMA-CGM which already enjoys a significant market share in Nigeria's terminal operation sector, will hold an 80 percent stake in the joint venture that operates the terminal. In fact, the participation of the French company was critical for CHEC's decision to invest in the project. "Our company leaders did not trust the forecasts. They only gave the nod after CMA agreed to provide the traffic guarantee," according to a manager at CHEC.⁷²

To get the greenlight for such overseas investment was not easy. The investment proposal was first submitted to CHEC's headquarters in Beijing, then to its parent group CCCC. Once both decided to go ahead with the investment, the plan would then have to be approved by the SASAC, the SOE regulator. And as is the case with overseas investment in general, approvals would still need to be obtained from the National Development and Reform Commission and MOFCOM to ensure their alignment with the government's investment guidelines. Because the project was insured by Sinosure, China's state-run export and credit insurance agency, the deal also needed the go-ahead from the State Council and the Ministry of Finance. While being billed as a BRI project has little impact on its on-the-ground operation, it likely helped accelerate the approval process, as bureaucrats would expedite their paperwork. Yet, it took CHEC about three years to complete the bureaucratic process and obtain all the approvals needed to close the investment deal.⁷³

For the investment to make sense, the port's ability to generate revenues was key. Despite Nigeria's urgent need for a new port, whether the port will be a success still hinges on how well it is operated and maintained. CHEC was conscious that it had little experience in port operation—few Chinese companies do in ports outside China, despite the investment in dozens of ports around the world in recent years.⁷⁴ "The mainstream shipping lines are pretty much all controlled by the established [Western] port operators. [The few Chinese companies in overseas port operation] are

mostly in transshipment or branch shipping lines. It's hard to alter the big picture," commented a manager at CHEC.⁷⁵ Therefore, having an international industry leader taking up the operation of the port gave the Chinese SOE leaders some level of assurance. From CHEC's point of view, such cooperation suited the need of both: the French company could develop new shipping lines without having to invest in the physical infrastructure itself, which the Chinese company is willing to.

3) TEMPLATE OR EXCEPTION?

What, then, can we infer from the Lekki Port case for the Chinese infrastructure industry's potential to move toward a IICO model? The rest of this section discusses the strength and limitations of Chinese companies exhibited in the Lekki Port case.

In terms of strengths, while CHEC was not the only international investor approaching Tolaram, its ability to secure both the equity and loan financing was critical for it to stand out.⁷⁶ Brokered through CHEC, CDB provided a US\$ 629 million commercial loan (out of the project's total US\$ 1.044 billion investment cost). CDB has financed some of CHEC's other overseas investment projects, including a highway project in Jamaica and the Colombo Port City in Sri Lanka. As part of the credit enhancement measure, CDB has a cross-default clause for its projects, where if the borrower defaults on one project, disbursement in other projects will also be suspended.⁷⁷ CDB also required CHEC to insure with Sinosure to cover the loan. CHEC provides a limited guarantee (on the completion of construction) in the project. Therefore, it is one of the rare cases where limited-recourse project financing was achieved. The Nigerian Ports Authority and Nigerian Ministry of Finance also provided guarantees for their obligations under the concession agreement.

However, apart from the financing, CHEC can hardly claim credit for the core milestones essential for the project to happen. Arguably, the most difficult part of a greenfield infrastructure project—the so-called “early-stage development” that requires thinking through the entire project life cycle and “financial engineering” for the cash flow in futures decades—was largely conducted by Tolaram, before CHEC's equity investment involvement. There is a clear linkage between Tolaram's investment in the port with its investment in Lagos Free Zone, where factories manufacturing for international consumer brands such as Colgate and Kraft had already started operation by the time I visited in June 2022.⁷⁸ In other words, Tolaram will likely exercise its power as a shareholder in the port according to its interests in the industrial zone, whereas CHEC's commercial rationale for involvement with the port remains unclear and unarticulated.

It is also doubtful whether CHEC could have been the initiator of such an important project, given its identity as a foreign SOE. As a manager at CHEC confessed, Tolaram's relationship with the Nigerian government—built through its decades of experience in Nigeria as a leading manufacturer and distributor of household food items—was crucial for it to conclude the concession in 2011, something that a Chinese company was unlikely to accomplish on its own.⁷⁹ The Nigerian government gave Tolaram several deferments even though it repeatedly failed to meet financial close deadlines. Should this major Chinese SOE be in a similar situation of failing

to meet contractual obligations, commercial disputes would likely also trigger political controversies. In this sense, the tension between the SOEs' commercial nature and association with the Chinese state could hinder business pursuits, rather than help.

Similarly, CMA's willingness to participate in port operation and provide a guarantee for port traffic was a critical condition for the Lekki Port project to go ahead, as previously discussed. Tolaram's original choice for port operation (Philippine's ICTSI) was also indicative of the importance of port management knowhow. CHEC's capabilities as a leading EPC contractor were not considered critically important, even though its ability to mobilize financial resources eventually carried the day. This suggests that apart from their access to capital, Chinese SOEs remain at a relatively marginal position in the global value chain and have to rely on external partners to create value. This can become a vulnerability. "If you continue to rely on a third party for the port operation, you have little power to shape the market," comments an executive from another major SOE. He pointed out that, as a shipping company, CMA will prioritize profit-making in its core business of shipping and logistics, while using port operation as a cost center [for tax optimization], which means it may not allow the port to be very profitable.⁸⁰

There are also management challenges inherent to IICO, where the same company is acting as investor *and* contractor essentially engaging in "related party transactions," and accountability through internal controls can be weak. The team dispatched from CHEC headquarters to manage the Lekki Port investment are relatively young, with greater emphasis on finance training rather than engineering or project management. This reflects companies new need as they move to the role of investor, but the fact that these financial professionals tend to be less senior than the construction contracting personnel within the company hierarchy has implications when the investment side needs to hold the construction contracting side accountable. As a non-Chinese executive hired by other shareholders to oversee the port construction noted in an interview, when he called out shortcomings in the work of the contractor on behalf of the investor, CHEC management were reluctant to discipline the contracting side, since they belong to the same company, and because the latter is led by more senior managers.⁸¹ Such episodes illustrate the challenges with corporate governance as construction SOEs seek to transform themselves in the pursuit of new business models.

Close examination of the Lekki Port case therefore suggests that executing IICO remains much easier said than done, even for Chinese companies considered most capable of moving to this new model. The capability to operate overseas infrastructure projects, and to eventually earn capital interests from such investment, does not come naturally but has to go through a steep learning curve. CHEC's realization of IICO in the Lekki Port has critically depended on the inputs from the other international partners (Tolaram and CMA), which suggests that despite their dominant market position as construction contractors, Chinese infrastructure companies remain late comers in global capitalism and are still in a relative marginal position in the global value chain. While their ability to mobilize capital from China is providing them with a ticket to the game, it remains to be seen whether this can be an effective pathway for them to survive among international business competition and climb the value chain.

CONCLUSION: CHINESE STATE CAPITALS' EVOLVING ENGAGEMENT IN GLOBAL INFRASTRUCTURE DEVELOPMENT

This paper unpacks IICO as a prospective model that has been promoted by the Chinese infrastructure industry, financial institutions, and policymakers for the industry's continual internationalization. I show how this model's emergence was an attempt to address the moral hazard problems in the old EPC+F model that have by now been exposed, the mutually reinforcing problems of market saturation and low value-added activities, and was induced by the rise of PPP around the world, but most importantly within China. Moving from EPC+F to IICO would then mark a (partial) shift toward export market-seeking FDI activities, which would entail a more complicated risk profile than experienced by China's globalizing state capital in the past. Indications are that China's state capital managers (including SOE leaders and financial institutions) do not yet have a well-thought-out strategy to manage such risks, which is why IICO projects remain a small part of Chinese infrastructure industry's overseas business. Analysis of the Lekki Port case shows that even a leading Chinese infrastructure company remains dependent on the inputs of other international partners in successfully carrying out an IICO project. Whether such investment can deliver the set of goals the Chinese industry seeks to achieve, including to establish a foothold in the higher end of the value chain, and to re-organize resources to serve its further internationalization, remains to be seen.

This investigation into IICO provides a look at a critical juncture of the Chinese state capital's evolving engagement in global infrastructure development. Inherently risky yet critical for economic development, infrastructure has been a niche strategic sector for Chinese state capital to step in, as private capital and other forms of public capital (multilateral development finance and bilateral aid) are reluctant or inadequate to fulfill the demands. It was in this context that Africa became such an important market for Chinese EPC firms globally, making up close to 30 percent of their global business in the first two decades of this century. State capital has been understood to have longer time horizons and is more tolerant of risks.⁸² State capital differs from ordinary private capital in having a more diverse set of goals: profit maximization is replaced with profit optimization – meaning that state capital needs to satisfy and balance between several goals, which is not limited to making profit but at the same time scoring diplomatic points and/or supporting China's own domestic industrial development.⁸³

The globalization of China's state capital through overseas infrastructure engagements has been based on the calculation that higher risks can be worthwhile because of the gains in market expansion for China's infrastructure industry, the ground-laying for China's other industries to internationalize, and China's "soft power" as a development-enabler. The past model based on lending, or more precisely export credit, was a relatively conservative form of capital globalization, because the infrastructure construction companies, playing the role of contractors, had limited exposure to risks; creditors also are entitled to more protection than equity investors. Moving toward IICO, which involves greenfield equity investment, necessarily means greater risk exposure for both the companies and the financial institutions. Correspondingly, state capital is looking for greater pay-offs which would include not only market expansion for the infrastructure industry in

the quantitative sense, but also the industry's qualitative upgrade, so that it could attain a structural position as the shaper of business ecology at the upstream, rather than an order-receiver at the downstream. An analogy that may not be entirely appropriate is that they want to move from the position of Foxconn to that of Apple.

This process would be highly uncertain, as any entrepreneurial activities are, for two additional reasons. First, Chinese infrastructure companies past market expansion has been most successful in high-risk regions such as Africa. Path dependency would mean that they will continue to seek opportunities in these regions. There will be built-in bias toward high-risk geographies in their attempt to move toward IICO. Second, as companies seek to expand to high-profitability areas such as infrastructure operation, they will encounter direct competition with companies from advanced economies. For now, one of the Chinese companies' strategies is to collaborate with others, as seen in the case of Lekki Port in Nigeria and Kribi Port in Cameroon, but that also can be a vulnerability as the foreign partner dominates the joint venture. Another more aggressive approach has been to acquire foreign companies that occupy the higher end of the value chain, for example, China Communications Construction Corporation's acquisition of the Australian infrastructure company John Holland in 2014 and minority stake in the Portuguese construction company Mota-Engil in 2021. Such acquisitions can also be easily derailed for political reasons, should the host governments deny them.

IICO in the infrastructure construction industry is not the only way Chinese state capital is diversifying its engagement in global development. Researchers have also highlighted the rise of China's overseas development investment funds, which mirror the construction industry development that is the focus of this paper.⁸⁴ Similarly, they exhibit a desire to pursue higher profitability than traditional lending, although this also involves greater risks.

While part of the motivation for the push for IICO is to detach the commercial activities of China's infrastructure companies from direct involvement of governments (because of sovereign loans), in practice, however, overseas activities of Chinese SOEs can hardly be entirely de-politicized. The labeling of Lekki Port as a Belt and Road project, despite the project's separate history from the Chinese initiative, shows the inherent urge to invoke Chinese political discourse in SOEs' overseas infrastructure engagements. As the companies are involved in the long-term operation of these key infrastructure projects, it is expected that diplomatic channels would still be involved should any dispute arise. The entanglement of politics and commercial activities is likely to be greater, not less.

It is for these reasons that IICO as a new form for Chinese state capital to engage in global infrastructure development deserves continued attention and close study. It provides a window for understanding how China's state capital manages risks in the process of globalization, how China's policymakers balance the different goals state capital is supposed to achieve, and how China's SOEs compete and transform themselves in global capitalism. ★

ENDNOTES

1. Deborah Brautigam, "A Critical Look at Chinese 'Debt-Trap Diplomacy': The Rise of a Meme," *Area Development and Policy* 5, no. 1 (January 2, 2020): 1–14, <https://doi.org/10.1080/23792949.2019.1689828>; Deborah Brautigam and Meg Rithmire, "The Chinese 'Debt Trap' Is a Myth," *The Atlantic*, February 6, 2021, <https://www.theatlantic.com/international/archive/2021/02/china-debt-trap-diplomacy/617953/>; Lee Jones and Shahar Hameiri, "Debunking the Myth of 'Debt-Trap Diplomacy': How Recipient Countries Shape China's Belt and Road Initiative" (Chatham House, August 2020).
2. Kevin Acker and Deborah Brautigam. *Twenty Years of Data on China's Africa Lending*. No. 04/2021. Briefing Paper, 2021. SAIS-CARI; Loan commitments peaked with the exception of Angola, which was a special case of financing in 2016.
3. Jyhjong Hwang, Oyintarelado Moses, Lucas Engel, and Sobia Shadbar. *Chinese Loans to Africa During the COVID-19 Pandemic*. GCI Policy Brief 012, 04/2022. GDP Center, Boston University.
4. Hong Zhang, "The Aid-Contracting Nexus: The Role of the International Contracting Industry in China's Overseas Development Engagements," *China Perspectives*, no. 4 (2020): 17–27.
5. Ching Kwan Lee, *The Specter of Global China: Politics, Labor, and Foreign Investment in Africa* (Chicago; London: The University of Chicago Press, 2017); Ching Kwan Lee, "Global China at 20: Why, How and So What?" *The China Quarterly* 250 (June 2022): 313–31, <https://doi.org/10.1017/S0305741022000686>.
6. Meng Qiao 孟乔, "Zhenghe Youzhi Ziyuan, Buqi Fazhan Duanban -- Fang Haiwai Xiangmu Yunying Jishu Fuwu Lianmeng Mishuzhang Xin Xiuming" 整合优质资源 补齐发展短板—访海外项目运营技术服务联盟秘书长辛修明 [Integrating High-quality Resources, Making Up For The Shortcomings For Development -- Interview with Secretary-General of Overseas Project Operation Technical Service Alliance Xin Xiuming]. *Guoji Gongcheng yu Laowu* 国际工程与劳务11 (2016): 20–22.
7. MOFCOM, "Zhongguo Duiwai Touzi Hezuo Fazhan Baogao" 中国对外投资合作发展报告2017 [Report on Development of China's Outward Investment and Economic Cooperation 2017]. (Ministry of Commerce of the People's Republic of China, 2017), 45.
8. Interview with a manager at a major infrastructure company, online, October 2022 (202210NNPC).
9. Other variations of the term include "integrated investment, financing, construction, and operation," as financing is also a key component for such projects. But IICO is the most used term, so this paper also adopts it.
10. MOFCOM, "Shangwubu deng 19 Bumen Guanyu Cujin Duiwai Chengbao Gongcheng Gaozhiliang Fazhan de Zhidao Yijian" 商务部等19部门关于促进对外承包工程高质量发展的指导意见 [Guidelines on Promoting the High Quality Development of International Project Contracting by Ministry of Commerce and 18 other Agencies]. Ministry of Commerce, September 20, 2019, <http://hzs.mofcom.gov.cn/article/zcfb/a/201909/20190902900658.shtml>.
11. Xu Qiang 徐强, "Jichu Sheshi Xiangmu Jianying Yitihua Quanguo Taishi yu Zhongguo Celue" 基础设施项目建营一体化全球态势与中国策略 [Global Trends and Chinese Strategies on Construction-Operation Integration in Infrastructure Projects], *Guoji Jingji Hezuo* 国际经济合作, no. 10 (2015): 15–20.
12. Boston University Global Development Policy Center, China's Global Power Database. Accessed November 16, 2022.
13. Interview with a manager at an infrastructure company, online, October 2022 (202210NNPC).
14. Calculated with data from CARI and GDP Center.
15. Calculated with the data from the World Bank's Major Contract Award database.
16. Interview with a senior manager at an infrastructure company, Nigeria, June 2022 (202206UNEHE).
17. Interview with an executive at an infrastructure company, Nigeria, June 2022 (202206ENHE).
18. Interview with a senior manager at a Chinese infrastructure company in Nigeria, June 2022 (202206UNEHE).
19. Interviews Nigeria, June 2022 (202206UNEHE, 202206ENHE).

20. This was mentioned in Pairault (2020). Also confirmed in my fieldwork in Nigeria by an employee of CHEC.
21. Yang Qiulin杨秋林, "Haiwai Tielu Xiangmu 'Jianying Yitihua' Silu Tantaohai 海外铁路项目‘建营一体化’思路探讨 [Discussion on Approaches to Integrated Construction-Operation in Overseas Railway Projects]. *Tiedao Jianzhu Jishu* 铁道建筑技术 9 (2018): 9–12.
22. CHINCA, "Jiaoliu Yantao: Toujianying Yitihua zhi Shijian Dayi" 交流研讨: 投建营一体化之实践答疑 [Exchange and Discussion: Answering Questions in the Practice of Integrated Investment-Construction-Operation]. December 14, 2016, <https://www.chinca.org/sjtcoc/info/60423>.
23. Based on the 'major Chinese companies' in MOFCOM's Country Guide on Outward Investment and Cooperation for Gabon, 2018 and 2021.
24. Interview with an executive at an infrastructure company, Nigeria, June 2022 (202206NNPC).
25. Kate Bayliss and Elisa Van Waeyenberge, "Unpacking the Public Private Partnership Revival," *The Journal of Development Studies* 54, no. 4 (April 3, 2018): 582, <https://doi.org/10.1080/00220388.2017.1303671>.
26. The World Bank, Infrastructure Finance, PPPs & Guarantees, Regional Snapshots – Africa. <https://ppi.worldbank.org/en/snapshots/region/sub-saharan-africa>.
27. Interview with an executive at an infrastructure company, online, October 2022 (202210NNPC).
28. <https://www.chinanews.com.cn/cj/2022/03-18/9706084.shtml>.
29. Hui Jin and Isabel Rial, "Regulating Local Government Financing Vehicles and Public-Private Partnerships in China," Working Paper (IMF, September 2016), <https://www.imf.org/external/pubs/ft/wp/2016/wp16187.pdf>.
30. *China's PPP Industry Development Report* (Beijing: Social Sciences Academic Press (China), 2021), 15.
31. Annual Financial Reports of China Energy Engineering Corporation and Power Construction Corporation of China, 2021.
32. Annual Financial Report of China Communications Construction Company, 2021.
33. Interview with an executive at an infrastructure company, Nigeria, June 2022 (202206GOUHE).
34. Within China construction industry, eight central SOEs are considered the "Big Eight": Power Construction Corporation of China, China Communications Construction Corporation, China Railway Engineering Corporation, China Railway Construction Corporation, China Energy Engineering Corporation, China State Engineering Construction Corporation, China Metallurgical Group Corporation, and China National Chemical Engineering Group Corporation. Table 1 lists only the first six, as the other two's main business are in industrial construction rather than infrastructure.
35. Liu Xiangchen刘向晨, "Yongli Chaotou Zai Zhengxian -- Xiezai Gongsi Chengli 9 Zhounian zhiji" 勇立潮头再争先—写在公司成立9周年之际 [Courageously Standing Ahead of the Tide: In Celebration of the 9-year Anniversary of the Company's Founding]. PowerChina Overseas Investment Co., Ltd., July 5, 2021, <https://pr.powerchina.cn/s/1296-4668-15874.html>.
36. Subsidiary of China Railway Capital Co., Ltd., itself a subsidiary of CREC. The Hong Kong company was originally set up to facilitate international fund-raising for domestic projects – unlike the other companies in the table that were set up specifically for international investment – but it has later also served this function.
37. CHINCA, "Zhang Hui: Jiaqiang moshi yanjiu, jiada ziyuan zhenghe, tuijin duofang hezuo, tuidong PPP moshi shijian" 张辉: 加强模式研究、加大资源整合、推进多方合作、推动PPP模式实践 [Zhang Hui: enhance research on model, strengthen resource integration, promote multi-partner cooperation, and advance practice of PPP models]. Accessed at: <http://events.chinca.org/luntankaimushi222/201.html>.
38. Interview with an executive at an infrastructure company, Nigeria, June 2022 (202206GGNHE); I thank Yufan Huang for this insight based on his interviews with Chinese financial institutions.
39. Calculated from MOFCOM data on overseas project contracting.

40. Alvaro Cuervo-Cazurra, ed., *State-Owned Multinationals: Governments in Global Business*, JIBS Special Collections (Cham: Springer International Publishing, 2018), <https://doi.org/10.1007/978-3-319-51715-5>; Chih-shian Liou, “Bureaucratic Politics and Overseas Investment by Chinese State-Owned Oil Companies: Illusory Champions,” *Asian Survey* 49, no. 4 (August 2009): 670–90; Adam William Chalmers and Susanna Theresia Mocker, “The End of Exceptionalism? Explaining Chinese National Oil Companies’ Overseas Investments,” *Review of International Political Economy*, January 11, 2017, 1–25, <https://doi.org/10.1080/09692290.2016.1275743>; Milan Babic, Javier Garcia-Bernardo, and Eelke M. Heemskerk, “The Rise of Transnational State Capital: State-Led Foreign Investment in the 21st Century,” *Review of International Political Economy* 27, no. 3 (May 3, 2020): 433–75, <https://doi.org/10.1080/09692290.2019.1665084>.
41. Interview with a manager at an infrastructure company, Nigeria, June 2022 (202206EGHE).
42. Interview with an executive at an infrastructure company, Nigeria, June 2022 (202206GGNHE).
43. State Council Information Office, “China and Africa in the New Era: A Partnership of Equals,” November 2021, https://www.fmprc.gov.cn/mfa_eng/wjdt_665385/2649_665393/202111/t20211126_10453904.html.
44. Stephen B. Kaplan, “Banking Unconditionally: The Political Economy of Chinese Finance in Latin America,” *Review of International Political Economy* 23, no. 4 (July 3, 2016): 643–76, <https://doi.org/10.1080/09692290.2016.1216005>; Stephen B. Kaplan, *Globalizing Patient Capital: The Political Economy of Chinese Finance in the Americas* (Cambridge; New York, NY: Cambridge University Press, 2021).
45. Anna Gelpern *et al.*, “How China Lends: A Rare Look into 100 Debt Contracts with Foreign Governments” (Peterson Institute for International Economics, Kiel Institute for the World Economy, Center for Global Development, and AidData at William & Mary., 2021); Lui Kanyi and Chen Yunnan, “The Evolution of China’s Lending Practices on the Belt and Road,” ODI Emerging Analysis (London: ODI, November 2021); Deborah Brautigam *et al.*, “How Africa Borrows From China: And Why Mombasa Port Is Not Collateral for Kenya’s Standard Gauge Railway,” Working Paper (SAIS-CARI, April 2022).
46. There are exceptions. The Hwange Thermal Power Station in Zimbabwe is an IICO project that involves sovereign loan. China Eximbank lends US\$1 billion to the Zimbabwean government, which then on-lends to the project company, which is a joint venture between Zimbabwe’s state-owned power company (64 percent) and the Chinese construction company (36 percent).
47. Yang Haixia 杨海霞, “Zhichi Qiye Zouchuqu Xu Duoweidu Gongdan Fengxian -- Zhuanfang Zhongguo Dianjian Haiwai Touzi Gongsi Zongjingli Du Chunguo” 支持企业走出去需多维度共担风险 ——专访中国电建集团海外投资公司总经理杜春国 [Supporting Enterprise Going Out Requires Multi-dimensional Risk-sharing -- Interview with General Manager of PowerChina Group Overseas Investment Company Du Chunguo]. *Zhongguo Touzi* 中国投资, December 2019.
48. Dai Guohua 戴国华, “Zhongyang Jianzhu Qiye Jiang Ganggan Jian Fuzhai de Xianzhuang, Chengyin Fenxi ji Xiangguan Jianyi (Shang)” 中央建筑企业降杠杆减负债的现状、成因分析及相关建议 (上) [Current State, Causes, and Suggestions for Deleveraging and Debt Reduction of Central Construction Enterprises]. *Caiwu yu Kuaiji* 财务与会计4 (2019): 39–43.
49. General Office of the Chinese Communist Party and General Office of the State Council, “Guanyu Jiaqiang Guoyou Qiye Zichan Fuzhai Yueshu de Zhidao Yijian” 关于加强国有企业资产负债约束的指导意见 [Guidelines on Enhancing Constraint on the Debt-to-Asset Ratios of State-owned Enterprises] The State Council Information Office of the People’s Republic of China, accessed November 17, 2022, <http://www.scio.gov.cn/xwfbh/xwfbh/wqfbh/39595/40212/xgzc40218/Document/1651874/1651874.htm>.
50. Interview with a manager with an infrastructure company, Nigeria, June 2022 (202206GGUEE).
51. General Office of the State Council, “Guowuyuan Bangongting Guanyu Jianli Guoyou Qiye Weigui Jingying Touzi Zeren Zhuijiu Zhidu de Yijian” 国务院办公厅关于建立国有企业违规经营投资责任追究制度的意见 [Opinions of the General Office of the State Council on Establishing an Accountability System for Business Operations and Investment in Violation of Regulations by State-Owned Enterprises]. Gov.cn, August 23, 2016, http://www.gov.cn/zhengce/content/2016-08/23/content_5101590.htm.
52. Interview with an industry consultant in Beijing, online (202111UOU).
53. Yang Caixia 杨彩霞, “‘Zhuankehua’ caishi Gongcheng Chengbao Shichang de Zhuliu Fangxiang -- Zhuanfang Sanxia Guoji Nengyuan Touzi Youxian Gongsi Jingying Guanlibu Fuzhuren Zhang Hongxun” ‘专业化’ 才是工程承包市场的主流方向 ——专访三峡国际能源投资有限公司经营管理部副主任张洪勋 [Specialization is the mainstream of the project contracting market -- Interview with Zhang Hongxun, Deputy Director of Operation Management Department, Three Gorges International Energy Investment Co., Ltd.]. *Zhongguo Touzi* 中国投资, February 2020.

54. Wan Siqin 万斯琴, "Zhuangfang Guowuyuan Guoyou Zichan Jiandu Guanli Weiyuanhui Yanjiu Zhongxin Zhuren Li Baomin Shijie Yiliu Yangqi Shangcun Duofangmian Chaju." 专访国务院国有资产监督管理委员会研究中心主任李保民 世界一流央企尚存多方面差距 [Interview with Li Baomin, Director of Research Center, State-owned Assets Supervision and Administration Commission of the State Council: central SOEs still have gaps in many aspects from the goal of world-class companies]. *Zhongguo Qiye Bao* 中国企业报, December 16, 2011, 8 edition.
55. Renminwang 人民网, "Xiao Yaqing: Guoqi Gaige de Genben Mudi Shi Peiyu Shijie Yiliu Qiye" 肖亚庆: 国企改革根本目的是培育世界一流企业 [Xiao Yaqing: Fundamental Goal of SOE Reform is to Cultivate World-class Enterprises]. *Renminwang* 人民网, March 10, 2018, <http://lianghui.people.com.cn/2018npc/n1/2018/0310/c418414-29859988.html>.
56. Xinhua Net, "Xi Jinping Zhuchi Zhaokai Zhongyang Quanmian Shenhua Gaige Weiyuanhui Di Ershisici Huiyi Qiangdiao: Jiakuai Jianshe Shijie Yiliu Qiye Jiaqiang Jichu Xueke Rencai Peiyang" 习近平主持召开中央全面深化改革委员会第二十四次会议强调: 加快建设世界一流企业 加强基础学科人才培养 [Xi Jinping Chairs Central Commission for Comprehensively Deepening Reform 24th meeting: Speed up the construction of world-class enterprises, strengthen the talent cultivation for basic disciplines]. Gov. cn, February 28, 2022, http://www.gov.cn/xinwen/2022-02/28/content_5676110.htm.
57. SASAC, "Duibiao 'Shijie Yiliu' Yangqi Jiasu Benpao" 对标 '世界一流' 央企加速奔跑 [Benchmarking World-class, Central SOEs Accelerating]. State-owned Assets Supervision and Administration Commission of the State Council, n.d., <http://www.sasac.gov.cn/n4470048/n22624391/n23826238/index.html>.
58. Interview with a manager at an infrastructure company, Nigeria, June 2022 (202206GGNHE).
59. Liu Yi 刘毅, "Zhongguo Guoji Gongcheng de 2021" 中国国际工程的2021 [2021 of China's International Project Contracting]. *Haiwai Shichang Kaifa yu Shangwu* 海外市场开发与商务, 2021.
60. CHINCA; Humei Li et al., "Dataset of China Oversea Port Projects during the Last Forty Years (1979-2019)" (Global Change Research Data Publishing and Repository), accessed November 22, 2022, <https://doi.org/10.3974/geodb.2019.04.15.V1>.
61. ENR, Top 250 International Contractors, 2015-2022.
62. SBM, "Chart of the Week: Comparison of Shipping Costs," *Nigeria's Leading Geopolitical Intelligence Platform* (blog), March 4, 2020, <https://www.sbmintel.com/2020/03/chart-of-the-week-comparison-of-shipping-costs/>.
63. Sulaimon Salau, "Nigeria Loses \$55 Million Daily to Port Congestion," *The Guardian Nigeria News - Nigeria and World News* (blog), September 2, 2020, <https://guardian.ng/business-services/nigeria-loses-55-million-daily-to-port-congestion/>.
64. CEICData, <https://www.ceicdata.com/en/indicator/nigeria/container-port-throughput>.
65. ThisDay, "Lekki Deep Seaport: Changing Nigeria's Maritime Story – THISDAYLIVE," This Day Live, July 4, 2022, <https://www.thisdaylive.com/index.php/2022/07/04/lekki-deep-seaport-changing-nigerias-maritime-story/>.
66. CDB has financed some of CHEC's other overseas investment projects, including the Jamaica highway and the Colombo Port City in Sri Lanka. CDB has a cross-default clause for its projects, where if the borrower defaults on one project, disbursement in other projects will also be suspended. For this project, CDB also required CHEC to insure with Sinosure as in this project, CHEC's parent company isn't providing definite guarantee.
67. Interview (202206GGNHE).
68. Interview with Nansel Zhimwan, Assistant General Manager, PPP, Nigerian Ports Authority, June 2022.
69. This is not to be confused with the Lekki Free Zone invested by another Chinese company China Civil Engineering Construction Corporation in 2006, which is a few kilometers away from the port. The Lekki Free Zone remained largely unfilled when I visited in June 2022, though the zone's managers were hopeful that the Lekki Port, once coming into operation, will help them attract more tenants.
70. Interview with Nansel Zhimwan, Assistant General Manager, PPP, Nigerian Ports Authority, June 2022.
71. Interview (202206GGNHE).
72. Interview (202206EGHE).

73. Interview (202206GGNHE).
74. Issac B. Kardon and Wendy Leutert, "Pier Competitor: China's Power Position in Global Ports," *International Security* 46, no. 4 (2022): 9–47.
75. Interview (202206GGNHE).
76. Internal report, Lekki Port Company.
77. Interview (202206GGNHE).
78. Interview with an infrastructure industry professional, online, October 2022 (202210SSOID).
79. Interview (202206GGNHE).
80. Interview with an executive at an infrastructure company, Nigeria, June 2022 (202206INMP).
81. Interview with an executive at Lekki Port, Nigeria, June 2022 (202206MNLP)
82. Kaplan, *Globalizing Patient Capital*.
83. Lee, *The Specter of Global China*.
84. Oyintarelado Moses, Laura Gormley, and Cecilia Springer, "China's Paid-In Capital: Identifying and Analyzing China's Overseas Development Investment Funds," GCI Working Paper, November 2022; Ying Xia and Muyang Chen, "The Janus Face of Stateness: China's Development-Oriented Equity Investments in Africa," *World Development* 162 (February 2023): 106133, <https://doi.org/10.1016/j.worlddev.2022.106133>.

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