Chinese Investment in Bauxite and Alumina: How Credible Are Promises of Processing Development?
Executive Summary

The Indonesian mineral ore export ban has caused a scramble for bauxite and other mineral resources, particularly among Chinese firms that were previously heavily dependent on Indonesian exports. In several instances, Chinese firms have offered the promise of future processing capacity development – the building of alumina refineries and aluminum smelters, in the case of bauxite – in order to secure long-term contracts for mineral ore today. Among the most likely targets for such deals are Guinea, Jamaica and Vietnam. This brief assesses downstream development potential in these three countries on the basis of both practical considerations, including the quality of energy infrastructure, and political concerns. It concludes: 1) Chinese promises to develop local processing capacity are most credible in Vietnam but complicated by increasingly icy bilateral relations between the Vietnamese and Chinese governments; and 2) the promises are less credible in the cases of Guinea and Jamaica for issues related to host-country infrastructure, reliance on imported energy, and, in the case of Jamaica, democratic political institutions, its comparatively strong civil society, and location in the Caribbean basin.

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China’s Appetite for Metals

China’s demand for industrial inputs, particularly metals, is exceptional. China’s economy accounts for 14.3 percent of world GDP (purchasing power parity) but more than 60 percent of global iron trade and more than 45 percent of global refined metals consumption.\(^1\) China’s demand for base metals is three times higher than that of South Korea and Japan, two rapid industrializers, when they were at an equivalent level of development.\(^2\) This voracious appetite for metals is a result of China’s rise as a major industrial power and global trader. In the 1980s, China accounted for less than one percent of global trade; by 2013, it had assumed the mantle of the world’s biggest trading nation. Despite a recent slump in Chinese industrial output growth, China will continue to exert large impacts on global commodity markets in the future.

China’s demand for metals and large current account surpluses have catalyzed a gold-rush-like frenzy of investment in extractives – both energy and metals – abroad. Chinese investments and contracts for metals abroad have totaled $123.8 bn since 2005.\(^3\) Investment in the Eastern hemisphere predominates, with nearly three-quarters invested in Africa, Australia, and Asia (Figure 2). Peru accounts for the largest share in the Western hemisphere, with North America, Europe and the

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1. Hendrix and Noland 2014, 71; Baffes and Cosic 2014, 12.
2. Roache 2012, 4. See Figure 1.
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Caribbean contributing negligible amounts due to the location of mineral deposits, transport costs, and geopolitical considerations.

Bauxite and alumina have accounted for a major share of this investment: $33.9 bn, with Chinalco and China Power Investment Co., two state-owned enterprises, providing two-thirds of that total. Bauxite and alumina demand in China significantly exceeds domestic production capacity, making China import-dependent.


Until recently, Chinese bauxite imports were sourced primarily from Indonesia and Australia. Indonesia’s export ban on raw materials, legislated in 2009 but only enacted in January 2014, has forced Chinese firms to diversify imports, seek out new trading and investment partners, and attempt to negotiate a relaxation of the Indonesian ban on raw bauxite exports in return.

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4 Ibid.
for developing Indonesian refining capacity. Currently, Indonesia has only one alumina refinery, which transforms bauxite into aluminum oxide. A second refinery, the product of a joint venture between Indonesian conglomerate Harita Group and China's Hongqiao Group, has been put on hold until at least 2016, with Chinese funding for the project seemingly contingent on at least a partial resumption of raw bauxite exports. Despite negative short-run impacts, the Indonesian ban is likely to stay for the foreseeable future (see box).

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This refinery produces so-called chemical-grade alumina that is not used for the production of aluminum.
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Box 1: Indonesia’s Export Ban
Mining is central to the Indonesian economy, accounting for 12 percent of GDP and 36.4 percent of exports. In 2009, the Indonesian parliament passed Law No. 4 of 2009 on Mineral and Coal Mining, which had two provisions that would radically alter Indonesia’s mining sector:

1. Export of unprocessed minerals after 12 January 2014 would be prohibited, requiring mining companies to process and refine their product in Indonesia; and
2. An accelerated divestment plan, would require foreign shareholders to divest shares to achieve majority Indonesian ownership within 10 years from the commencement of commercial production.

The law’s clear intent was to force the Indonesianization of the country’s mining sector and promote movement up the value chain by forcing companies to invest in downstream capacity. That capacity was not initially forthcoming: lower commodity prices and uncertainty about the government’s will to enact the ban meant local processing capacity was not developed. To forestall a complete halt to mineral exports, Indonesia’s parliament amended the export ban to allow export of semi-processed copper, iron, lead, zinc, manganese, titanium and ilmenite for the next three years. Nickel and bauxite, however, were not included in the amended purity guidelines, and thus the ban immediately halted nickel and bauxite exports. This sent many of Indonesia’s trade partners, particularly China, scrambling to secure access to new resources.

Implemented this past January, the immediate effects of the ban were to swing Indonesia into trade deficit and curtail economic growth, with quarterly growth contracting by 1.4 percent. Moreover, the Indonesian Mineral Entrepreneurs Association reported that over 30,000 miners had been laid off.

Despite initial hardships, it appears the ban is here to stay. The ban has been effective in catalyzing investments in processing. Unlike many other primary producers, Indonesia is well poised to develop indigenous smelter capacity, with ample energy resources and a large and diversified domestic market for refined products. In August, Indonesia’s Investment Coordinating Board reported over $8 bn was being spent on three alumina refineries and two ferronickel projects; major investors include Chinese firms Bosai Minerals, Chalco, and the Hongqiao Group, as well as Indonesia’s Antam. Five processing projects have advanced beyond feasibility studies and are in either the environmental impact assessment or construction stages, though it remains to be seen whether these projects will ultimately come to fruition. If this processing and smelting capacity comes online, Indonesia will likely emerge as a producer of value-added alumina and aluminum serving both domestic and export markets. At the very least, the export ban appears to be moving Indonesia’s mining sector up the value chain by catalyzing large-scale investments in processing.


Though global commodity markets have cooled somewhat, competition for new concessions is still fierce. One strategy has been to secure mining interests in part by promising or strongly signaling future Chinese investment in developing downstream refinement and production capacity. For instance, South Africa’s Industrial Development Corporation recently signed an
MOU with China’s Hebei Iron and Steel Group to conduct a feasibility study for developing a new steel plant. This agreement came on the heels of Hebei’s acquisition – as part of a consortium – of a cluster of mines in Limpopo province.\(^6\)

In the case of bauxite, the relevant downstream capacity would include alumina refineries, which transform bauxite into aluminum oxide, and aluminum smelters, which transform alumina for industrial and consumer applications.

Naturally, host country governments – particularly in developing countries – are keen to make agreements that enhance host-country downstream capacity. “Moving up the value chain” is one of the more oft-repeated prescriptions for promoting economic development. Aluminum trades for over 80 times the price of raw bauxite. For example, the impetus for the Indonesian raw materials export ban was to induce more investment in developing indigenous processing. Indeed, aluminum smelters provide a key input for development of local manufacturing. Host country governments can be forgiven for wanting to believe dreams of downstream development will come true. This is especially true for Jamaica, which runs structural trade deficits that could be partially alleviated by exporting more refined products.

Jamaica’s desire to develop smelting capacity has a long history. In the early 1950s, the United States sought to develop Jamaica’s bauxite industry in order to shorten supply chains and lessen dependence on supplies from Africa; in order to secure mineral rights, US firms proposed developing smelting capacity but ultimately came to rest on developing alumina refining capacity instead, with the product then shipped to Louisiana for smelting. Investment capital was forthcoming in part due to Cold War-era concerns about reliance on sources outside the US sphere of influence. Following the establishment of the Caribbean Community (CARICOM) in

the early 1970s, Jamaican president Michael Manley announced a plan to partner with Trinidad and Tobago and Guyana to develop a smelter in Trinidad. The project would have leveraged the vast bauxite resources of Jamaica and Guyana and the abundant energy of Trinidad and Tobago, but the idea never came to fruition. A similar plan, this time involving Colombia, was hatched in 1984, but ultimately abandoned due a surplus of smelter capacity in global markets. In 2004, CARICOM governments announced renewed plans for developing a smelter, which would have been a joint venture between Alcoa and Venezuelan aluminum company Sural, but the project was scuttled in 2010 over environmental concerns and questions about whether aluminum smelting was worth the significant investment of energy resources.

The move to further develop processing capacities in Jamaica has come back in vogue. In 2012, Jamaica’s Mining and Energy Minister Phillip Paulwell announced he was in discussions with “other players”, i.e., not Rusal or Alcoa, the large multinationals currently operating bauxite mines and alumina refineries in Jamaica, to make Jamaica “...a place where you can do the full range of processing.” Negotiations between Rusal and the Jamaican government over the threat of withdrawal of bauxite mining licenses grew tense in 2014, and Paulwell noted that at least four other sets of investors were eager to enter Jamaica’s bauxite sector should relations sour with Rusal. Though the other partners were not named, the *modus operandi* is fitting with Chinese firm behavior in other countries. At least one Chinese firm is already set to enter the market, with Xinfa Group Company Limited having a plan to establish a new alumina refining plant in St. Ann parish.

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8 As of July 11, 2014, Alcoa had announced plans to sell off Jamalco, its Jamaican subsidiary, in order to cut costs.
How credible are Chinese promises to develop downstream capacity in the future in return for mining rights in the present, however? The remainder of this brief assesses the downstream development potential for several bauxite-producing developing countries with significant export potential: Guinea, Jamaica, and Vietnam. First, it assesses the practical feasibility of any such investment: is domestic infrastructure, especially energy infrastructure, up to the task? Second, it considers domestic political institutions and context in all three potential host countries. Are host country governments able to provide the hands-off approach that Chinese firms prefer? Finally, are there relevant geopolitical considerations? On the first two counts, Chinese promises to develop local processing potential are greatest in Vietnam, though bilateral tensions between the two states might complicate such investment. The promise of processing development is less credible in the cases of Guinea and Jamaica for issues related to host-country infrastructure, reliance on imported energy, and, in the case of Jamaica, democratic political institutions, its comparatively strong civil society, and its location in the Caribbean basin.

Assessing Export Potential – Practical Considerations

Export potential for raw materials is a function of proven reserves, domestic consumption rates and/or level of development, and proximity to major importers. Over 90 percent of proven bauxite reserves are in 15 countries. Of these, Guinea (27 percent), Australia (22 percent) and Brazil (9 percent) have the largest deposits. However, several of the countries with large reserves also are industrialized/industrializing themselves, and as such export potential is somewhat constrained by domestic demand. Factoring in the size of the domestic economy (GDP at PPP) as a proxy for domestic consumption, however, yields a somewhat different picture. By this metric, Guinea, Guyana, and Jamaica emerge as the top three potential exporters, with truly massive reserves relative to the size of the local economy (see Table 1). Vietnam is not far behind. Market proximity matters as well. All four are situated relatively close to major importers: North America (Jamaica, Guyana), Europe (Guinea) and East Asia
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(Vietnam). Currently, both Jamaica and Vietnam have domestic alumina production capacity; Guinea’s Guinea Alumina Corporation is planning to bring domestic alumina refining capacity online by 2018.

Development of refining and smelting, on the other hand, is a function of availability of raw product, proximity to major importers, and perhaps most importantly, electricity-generating capacity and energy costs. Both alumina refining and aluminum smelting are incredibly energy-intensive: even the most efficient smelting pots require 13 kw/hours of electricity per kilogram produced.\textsuperscript{11} Though alumina refining is less energy-intensive, it still requires massive inputs of fuel (either coal, fuel oil or natural gas) relative to bauxite mining. For this reason, many major smelting facilities are generally located in areas with low energy costs due to abundant natural gas (United Arab Emirates, Bahrain), coal (China, the USA), or hydroelectric power (Canada, Russia), while many alumina refining facilities are developed where both bauxite availability and competitive supply of fuel can be ensured over the long term (Australia, Brazil, China). Both current generating capacity and total generating potential should figure into siting decisions.

In terms of current generating capacity, Vietnam’s outstrips that of both Guinea and Jamaica, even accounting for vast differences in the sizes of each country’s economy: on a MW per bn (PPP) of GDP basis, Vietnam has nearly twice the energy generating capacity (Table 2). Any

\begin{table}[h]
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\begin{tabular}{|l|c|}
\hline
Country & Export Potential (Res. (mt)/GDP, bn 2013 USD) \\
\hline
Guinea & 1,194,932 \\
Guyana & 276,357 \\
Jamaica & 139,254 \\
Suriname & 110,879 \\
Vietnam & 12,253 \\
Australia & 3,845 \\
Greece & 2,482 \\
Brazil & 1,158 \\
Indonesia & 1,152 \\
Venezuela & 730 \\
World & 378 \\
\hline
\end{tabular}
\caption{Bauxite Export Potential for Countries with Significant Reserves}
\end{table}

\textit{Sources: USGS 2014, World Bank 2014.}

\textsuperscript{11} Alcoa N.d.
refining and smelting development in Guinea or Jamaica would require a massive increase in domestic generating capacity: for instance, many modern smelters are powered by dedicated generators with several times the generating capacity (~2,200 MW) of Guinea’s and Jamaica’s entire grids. Of the three, only Jamaica has seen declines in its generating capacity over the past decade.

<table>
<thead>
<tr>
<th>Country</th>
<th>Installed Capacity (MW)</th>
<th>GDP PPP, Bn</th>
<th>MW/Bn</th>
</tr>
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<tbody>
<tr>
<td>Guinea</td>
<td>400 MW</td>
<td>$12.5 bn</td>
<td>32.0</td>
</tr>
<tr>
<td>Jamaica</td>
<td>920 MW</td>
<td>$25.2 bn</td>
<td>36.5</td>
</tr>
<tr>
<td>Vietnam</td>
<td>15,210 MW</td>
<td>$359.8 bn</td>
<td>62.8</td>
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Regarding energy generating potential, how do Guinea, Jamaica and Vietnam compare? Coal, oil and natural gas, and hydropower are the feasible sources of energy. Of the three, only Vietnam has significant domestic reserves of coal and hydrocarbons: 2.5-5 bn tons of coal, 4.4 bn barrels of crude oil and 700 bn m³ of natural gas. While currently self-sufficient in natural gas, Vietnam’s own national gas company forecasts it will be import-dependent by 2025. Currently, Guinea has neither oil nor natural gas, though a bevy of exploration in its coastal waters may change that. For the moment, however, both Guinea and Jamaica are completely hydrocarbon import-dependent.

In part because of the energy intensity of existing bauxite mining and processing facilities, Jamaica imports more hydrocarbons per capita than any other Caribbean nation. Hydrocarbon imports are a major contributor to Jamaica’s persistent trade deficits and make Jamaica’s electricity costs ($0.42 per kWh) among the highest in the world. The World Economic Forum’s

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13 USEIA 2014.
Global Energy Architecture Performance Index Report ranks Jamaica’s energy infrastructure as the second lowest performer in the region, marginally ahead of Haiti.\(^{14}\) Indeed, Rusal and Alcoa, two multinationals with significant bauxite interests in Jamaica, have at times temporarily shut down their Jamaican alumina refining plants due to high energy costs: two of Rusal’s plants (Alpart and Kirkwine) have been offline since 2009, while a third plant – Ewerton – was restarted after a short break in 2010.\(^ {15}\)

Guinea and Vietnam both have large hydropower potential. Three of Africa’s major rivers – the Gambia, the Niger, and the Senegal – flow from Guinea’s highlands, and its technical-economic hydropower potential has been estimated at 6,000 MW.\(^ {16}\) Moreover, it does not rely on trans-border inflow to satisfy any of its domestic water needs. Because upstream countries can restrict water available to downstream countries, often to satisfy their own demands for hydroelectric power, Guinea has considerable autonomy, though it may complicate its relations with neighboring countries. Vietnam has considerable technical-economic potential as well (19,000-21,000 MW), though a large proportion of its domestic renewable freshwater – 60 percent – originates outside its borders.\(^ {17}\) Since it is a downstream country, its decisions about developing hydropower do not affect its co-riparian states. However, all of Vietnam’s upstream neighbors (Cambodia, China, and Laos) are currently undertaking or pondering their own programs of hydropower development, which may curtail downstream potential. In contrast, Jamaica has comparatively little hydropower capacity. Jamaica’s four small waterways currently

\(^{14}\) WEF 2014.


\(^{16}\) Ministerial Conference on Water for Agriculture And Energy In Africa 2008.

\(^{17}\) FAO 2014.
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Contribute just 23 MW to the national energy grid.\(^\text{18}\) Development of processing capacity in Guinea or Jamaica would require large-scale import of energy resources, prices of which have been both increasing and increasingly volatile in the last decade.

From the perspective of both current grid capacity and future generating capacity, Vietnam emerges as the most likely candidate for developing capacity, with Guinea and Jamaica trailing behind. Jamaica’s low generating capacity, dependence on imported energy, and high electricity costs all suggest a promise to develop Jamaican processing and smelting capacity would run counter to market fundamentals.

**Domestic Political and Legal Institutions**

As with any investment in fixed assets, Chinese extractive enterprises operating in foreign countries face extraordinarily high costs to adjusting to host-country policy changes, and thus have strong incentives to meddle in their domestic politics. The Chinese “hands-off” approach to domestic policy extends only to the point where policy decisions affect the viability of Chinese investments. Moreover, a reciprocal policy of noninterference – courting Chinese FDI by adopting a hands-off approach to host-country oversight – is an increasingly untenable proposition, especially for democratic governments.

Concerns about Chinese investment point to its purported illiberal bent. Chinese firms, both state-owned and private, appear disproportionately to target their outward foreign direct investment at countries with large resource endowments and weak legal institutions.\(^\text{19}\) This is likely due to two factors: 1) a more permissive environment for corruption at home; and 2) a


\(^{19}\) Kolstad and Wiig 2012.
desire to operate in contexts where civil society is in a comparatively weak position to press Chinese firms on corporate social responsibility-related issues. First, Chinese firms lack the same domestic constraints on engaging in corrupt practices abroad that many Western firms face, such as the Foreign Corrupt Practices Act, which US authorities have applied extraterritorially, and the OECD Anti-Bribery Convention. A more permissive environment for corrupt practices back home gives Chinese firms a competitive advantage over more constrained Western firms in comparatively corrupt environments. Emblematic of these advantages are the dealings of the 88 Queensway Group, a network of Chinese businesses with interests in some of Africa’s most repressive dictatorships (Zimbabwe) and corrupt petro-states (Angola, Nigeria). The Queensway Group’s main representative in Africa, Sam Pa, was recently added to the US Treasury’s Office of Foreign Assets Control’s (OFAC) sanctioned persons list for illicit diamond deals with Robert Mugabe’s regime in Zimbabwe. At a more macro level, Chinese firms have not been involved in multilateral efforts to improve the transparency of extractive industries contracts, such as the Extractive Industries Transparency Initiative. China has legislated a prohibition on foreign bribery in order to comply with the UN Convention Against Corruption (UNCAC), but UNCAC does not monitor enforcement, and implementation has been very weak.

Chinese firms also have developed a reputation for tax evasion. Indonesia’s multi-layer system of mining licensing has facilitated foreign firms exporting raw materials without registering with the Ministry of Finance. Independent observers estimate under-reported mineral exports may have cost the Indonesian government as much as $527 million between 2012 and 2013; that China’s reported mineral import figures exceed Indonesia’s recorded mineral exports by a considerable margin is prima facie evidence Chinese firms are not paying taxes on a considerable share of imports. In Africa, Chinese firms have faced similar allegations. In May,

20 Hendrix and Noland 2014.

KRA Commissioner General John Njiraini accused several Chinese firms of systematic under-declaration of cargo, denying the Kenyan government significant revenues.22

Second, Chinese firms may prefer to operate in environments where local citizens have comparatively few (or weak) institutional levers via which to press Chinese firms on corporate social responsibility-related issues. The corollary to China’s policy of non-interference in the domestic affairs of host-country governments is an expectation that host-country governments will be equally hands-off with respect to Chinese firms operating within their borders. Mining is among the most dangerous industries in the world, and mining accidents are headline-grabbing events. Chinese firms have spotty worker rights, environmental, and safety records in many countries, and locals often resent Chinese firms’ importation of Chinese workers to staff their facilities. The Chinese-owned Ramu nickel mine in Papau New Guinea, for instance, has been a source of recurrent conflict. The mine’s construction occasioned anti-Chinese rioting in 2009 that left at least four people dead, and more recent arson attacks against the facility are related to environmental concerns and allegations that Ramu engages in discriminatory hiring practices.23 Understandably, Chinese firms prefer not to have these issues politicized.

Zambia’s experience with Chinese-owned mines is instructive of what can happen when Chinese interests collide with those of a democratic host-country government. Between 2000 and 2011, China provided nearly $3 bn in development assistance to Zambia, with an additional $2.8 bn coming in the form of FDI.24 Much of this FDI has been targeted at Zambia’s mining industry, which accounts for roughly 10 percent of GDP and 50 percent of exports.25 Relations

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became strained over conflicts between Zambian miners and management at Chinese-owned mines. According to Human Rights Watch, Chinese mine management routinely failed to undertake adequate safety measures and provide miners with protective gear.²⁶ Fifty-one Zambian workers were killed in an explosion at a Chinese-owned copper mine in Chambishi in 2005. In 2010, mine security fired on miners protesting at the Chinese-owned Collum coal mine, injuring 13. Two years later, Collum was back in the news after Zambian miners killed a Chinese manager over a pay dispute. Presidential candidate Michael Sata, who for years had campaigned on anti-Chinese sentiment, was finally elected president in 2011. Two years later, bowing to pressure from both international and Zambian civil society, the Zambian government revoked all three of Collum’s mining permits.

Thus, Chinese investment in extractives may be particularly sensitive to host-country political institutions and the strength of civil society. Jamaica has been a thriving democracy for the entirety of the post-independence era, with regular elections and a free press. Energy prices are a big issue in national campaigns and Jamaican civil society – including the private sector – is well organized. Corporate social responsibility is discussed actively in major newspapers, and human rights organizations – both transnational and domestic – monitor working conditions and “name and shame” violators. In short, its domestic context is ripe for the politicization of Chinese investment, which renders less credible any promises of downstream development.

Comparatively less constrained governments, like those in Vietnam and Guinea, are more logical partners for Chinese firms. Despite some moves toward reform, Vietnam remains essentially a one-party communist dictatorship with neither press nor Internet freedom.²⁷ Since a 2008 coup, Guinea has made motions toward democratization, though 2013 elections were plagued by accusations of vote-rigging, suppression of opposition candidates, and the use of

²⁶ Human Rights Watch 2013.
²⁷ Freedom House 2014.
live fire by Guinean security forces to control popular protests. In addition to political turmoil, Guinea performs poorly on measures of rule of law and control of corruption.

Actual investments and contracts bear this out: since 2005, Vietnam and Guinea have received roughly twelve and seven times more Chinese investment and contracts than Jamaica. To date, Chinese investment in Jamaica has targeted the infrastructure (roads) and agricultural sectors, whereas it has been focused on extractives in Guinea (100 percent) and Vietnam (78.5 percent).²⁸

**Geopolitical Considerations**

Whatever the economic fundamentals and host-country domestic political context, bilateral relations should condition decisions about investment as well. Because investment in highly specific assets entails more political risk than other forms of foreign direct investment, the ability of the home country government to throw diplomatic weight behind its national firms helps to mitigate this risk. Thus, *ceteris paribus*, Chinese firms should prefer to invest in countries with solid, even subservient, bilateral relations with the Chinese government. Preferably, host countries should be outside the spheres of influence of other major powers.

Guinea has had diplomatic relations with China since 1959 and is well outside the US sphere of influence. Moreover, it does not recognize Taiwan; China’s pursuit of a One China policy has led it to cultivate strong relations with developing countries that deny such recognition, often using its foreign aid as a lever.²⁹ Guinea received the fifth most Chinese foreign aid per capita of all

²⁸ Author’s calculations based on Scissors 2014.
²⁹ Dreher and Fuchs 2015; Hendrix and Noland 2014.
African countries between 2006 – 2011, and China recently sent emergency medical staff to Guinea to help contain the recent outbreak of Ebola virus in the region.\(^\text{30}\)

While bilateral relations between Jamaica and China are not strained in any sense, Jamaica’s position in the Caribbean basin puts it solidly inside the US sphere of influence. As such, the Chinese government has sought to develop diplomatic relations in the region and make only tentative moves toward establishing a military presence. 2011 marked the first Chinese naval mission in the region, though it certainly avoided the appearance of gunboat diplomacy: the mission consisted of a visit by a naval hospital ship to Cuba. Moreover, Jamaica’s relations with the United States, in terms of migration, tourism, foreign investment, membership in international organizations, and even voting records in the United Nations, are quite strong.

Though closer to home, China-Vietnam relations have chilled considerably as China has sought to establish its own US-in-the-Caribbean-like sphere of influence in the South China Sea. This is due in part to increased competition over minerals and fishing rights. Tensions reached their highest point in May 2014 with the placement of a Chinese oilrig near the contested Paracels Islands, leading to riots in Vietnam that killed three Chinese nationals and damaged hundreds of Chinese-owned factories.\(^\text{31}\) In response, the Chinese government imposed a temporary moratorium on Chinese state-owned enterprises investing in Vietnam.\(^\text{32}\) Tensions over China’s various dam projects along the Mekong River are another potential source of friction. Nevertheless, China is by far Vietnam’s largest trading partner and an important source of FDI.


In terms of the total dollar volume of Chinese investments and contracts, Vietnam ranks 20th of 131 countries from 2005 to the present.33

**Summing Up**

The Indonesian export ban has caused a scramble for bauxite resources, especially among Chinese alumina and aluminum producers. In their pursuit of new markets, Chinese firms have often promised investment in host-country processing capacity in return for long-term contracts to mine raw ore. This brief assessed the credibility of these promises with respect to three countries with large bauxite export potential: Guinea, Jamaica, and Vietnam. Of the three, Vietnam emerges as the most credible location for developing indigenous processing, smelting and – eventually – downstream capacity, both due to energy generation potential and domestic political considerations. The most obvious barrier to the credibility of these promises would be the increasingly icy bilateral relations between the Chinese and Vietnamese governments. Guinea’s considerable hydropower potential is intriguing and its export potential truly massive, but the electricity demands of any processing or smelting development would dwarf current capacity and would be reliant on expensive imported energy. Finally, Jamaica combines the problems of weak current electrical capacity and reliance on imported energy with a political context that might give Chinese firms pause.

33 Scissors 2014.
References


