

# China's economic statecraft and african mineral resources: changing modes of engagement<sup>1</sup>

## A diplomacia econômica chinesa e os recursos naturais africanos: mudanças na forma de engajamento

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### Abstract

China's impressive inroads into Africa's resources sectors over the past decade are largely due to the timely match between cash-loaded China in search for raw materials and a continent with a vast pool of underdeveloped mineral deposits, whose exploration has been hindered for decades by underinvestment and infrastructure bottlenecks. Chinese 'infrastructure-for-resources' loans are ultimately a product of the convergence of Chinese and African interests at the dawn of the 21<sup>st</sup> century. This loan formula, swapping infrastructure for resources, came into being largely as a default strategy, inspired by China's own domestic experience, its competitive advantages and the African receptiveness to these kinds of barter deals. The paper explores how China has consistently used this approach over the past decade as a positive economic statecraft tool to pursue mineral resources security goals in Africa; and how the need to adjust its approach to challenges and new opportunities on the ground has led to noticeable shifts in recent years. It argues that, although infrastructure for resources remains an important tool to meet Beijing's supply concerns, China's strategies to access resource assets have become more diversified and market oriented, with its state-owned enterprises taking the lead and increasingly engaging in mergers and acquisitions.

**Key-words:** China – Africa – economic statecraft – Infrastructure-for-resources loans – change

### Resumo

A impressionante incursão da China nas indústrias extrativas na África ao longo da última década é em grande parte explicada, por um lado, por uma China com vastos recursos financeiros, mas sem recursos naturais para sustentar o seu crescimento econômico; e por outro lado, uma África com reservas maciças de recursos minerais, porém sem capital para investir na exploração e na infraestrutura necessárias para desenvolver essas reservas. Os empréstimos Chineses de "Infraestrutura-por-recursos naturais"

1 This paper is an updated version of an Occasional Paper published by the South African Institute of International Affairs in January 2013. Available at: <<http://www.saiia.org.za/occasional-papers/china-s-economic-statecraft-and-african-mineral-resources-changing-modes-of-engagement.html>>.

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são, em última análise um produto desta convergência de interesses na alvorada do século XXI. Este modelo de empréstimo, com base na troca de infraestrutura por acesso a recursos minerais, é largamente fundamentada na experiência doméstica da própria China, em suas vantagens competitivas e na abertura dos governos Africano para este tipo de permuta. Este artigo analisa a utilização deste instrumento de diplomacia econômica pela China ao longo da última década na prossecução dos seus interesses de segurança energética e mineral na África, bem como o ajustamento desta abordagem aos desafios e novas oportunidades que emergiram nos últimos anos as quais conduziram a mudanças perceptíveis nesta estratégia. A autora argumenta que, apesar dos empréstimos infraestrutura por recursos continuarem a ser uma importante ferramenta para atender às preocupações de Pequim com o abastecimento continuado (sobretudo de petróleo), as estratégias das companhias estatais Chinesas para acessar ativos petrolíferos e minerais tornaram-se mais autônomas, com as suas empresas estatais a envolverem-se crescentemente em fusões e aquisições.

**Palavras-chave:** China – África – Diplomacia Econômica – Empréstimos de Infraestrutura por recursos naturais – mudança.

## Introduction

Owing to the sheer size of its domestic demand and production of minerals, China has been a critical player affecting world minerals market since the dawn of the new century. This state of affairs is to a great extent explained by the need to feed its expanding industrial output, in particular, steel, electrical wire, cable, infrastructure, telecommunications and electronics industries.

China is a leading producer of a wide range of minerals, such as aluminium, cement, coal, copper, gold, iron and steel, lead, manganese, rare earths, silver, tin, tungsten, and zinc; and ranks among the world's top producers of many other mineral commodities. Nonetheless, its demand for a number of strategic minerals – including chromium, cobalt, copper, iron ore, manganese, nickel, petroleum, platinum group metals and potash – largely outstrips domestic supply. As a result, Beijing is currently a net importer of these minerals (Tse 2012). China's external reliance on mineral metals is expanding fast even in commodities in which it is a leading producer, such as tin (of which China became a net importer in 2008) and lead (of which China has been a net importer since 2009). Oil is, however, China's largest external reliance, as it is the world's second-largest oil consumer and importer after the US. Even though new oil findings in China's offshore are expected to offset some of the decline registered in its mature onshore fields, its imports are expected to continue growing in coming years owing to expanding domestic demand. At present over half of China's oil consumption is met by imports (U.S. 2012).

China's foreign trade structure illustrates this liability well. One of the most notable changing traits in its foreign trade over the past decade has been the increasing share of minerals in its global imports. In 2010 mineral commodities accounted for 64% of China's imports, totalling \$375 billion up from \$40 billion a decade ago (WTO 2012). In order to minimise its increasing vulnerability, Beijing has pursued a strategy of diversifying its supply sources, as shown in Table 1. Although Asia and the Middle East still account for a significant share of China's mineral

commodities supply, its imports from other resource-rich regions have expanded a lot faster in recent years. Africa's share in China's minerals imports has increased 14 times over the past decade, representing one of the fastest growth rates.

**Table 1 – China's fuel and mineral imports by region (\$ billion)**

	2000	2004	2008	2010
South and Central America	1.89	8.80	39.88	54.38
Africa	4.21	12.31	49.49	57.31
Commonwealth of Independent States (CIS)	2.60	7.00	22.57	29.04
Middle East	8.85	17.74	72.22	71.70
Asia	13.18	33.84	102.90	130.04
Rest of world	3.21	9.81	19.82	32.17
<b>Total</b>	<b>33.94</b>	<b>89.5</b>	<b>306.88</b>	<b>374.64</b>

Source: WTO, 'International Trade Statistics', various years, merchandise trade by product, region and major trading partner – China.

Along with supply diversification, in recent years the world has seen a steady expansion of China's equity shares in overseas mineral resources markets where these commodities abound, its assets now spanning from neighbouring Central Asia, Southeast Asia and Australasia to faraway regions, such as Africa and South America. According to A Capital Dragon Index, 51% of the \$68 billion of Chinese outward direct investment (ODI) in 2011 targeted natural resources (A Capital Dragon Index 2011). Acquiring production assets and reserves abroad plays a key role, not only as a means to ensure a steady supply in the long run, but also to have a greater say in future market developments upon which China is becoming increasingly dependent. This strategy has been particularly evident in Africa and South America, where the footprint of Chinese mining and oil SOEs has expanded significantly over the past decade<sup>2</sup>.

Ensuring a steady supply of non-renewable resources in the current global context is, however, a daunting task. The fast-expanding gap between ever-growing global consumption and finite mineral resources has fuelled fierce competition for supplies, leading to skyrocketing prices. Moreover, increasing supply uncertainty owing to a greater reliance on supply markets historically plagued by political instability, manipulation, terrorism, and nationalisation policies. In this framework, it comes as no surprise that mineral commodities rapidly climbed to the top of China's foreign policy agenda, as it constitutes one of its major external liabilities.

## Africa's bounty

For decades Africa's mineral resources remained underexplored owing to a variety of reasons, including low commodity prices, lack of investment, poor infrastructure, geographical obstacles and political instability. Gradual stabilisation of the continent over the past decade and the concomitant surge in demand for mineral commodities driven by emerging economies

<sup>2</sup> Although Chinese companies have also acquired a significant mineral portfolio in South America (in Chile, Peru, Bolivia, Venezuela and, more recently, important oil equity in Brazil), the penetration of this market proceeded at a slower pace throughout most of the decade and followed a different pattern, which is why it falls out of the scope of this analysis.

prompted a renewed interest on the African continent. Africa's resource bounty plays a key role in this surge of foreign direct investment (FDI) to the region, a trend that is expected to continue in coming years, as demand from emerging economies is forecasted to remain high. According to Ernst and Young, Africa's FDI is expected to reach \$150 billion by 2015, up from \$85 billion in 2010 (Ernst e Young 2011).

With investment pouring in, the true dimension of Africa's mineral reserves has also become better known. As of 2011 Africa accounted for 8% of global known oil deposits. Africa boasts one of the fastest regional growth rates in oil reserves, which have doubled in the past two decades. The largest reserves are located in Libya (47.1 billion barrels), Nigeria (37.2 billion barrels), Angola (13.5 billion barrels) and Algeria (12.2 billion barrels). In terms of production, Africa is the third-largest regional producer, with a world total share of 10.4%. The country ranking changes a bit with Nigeria as the main African oil producer (2.5 million barrels per day or bpd), followed by Angola (1.8 million bpd), Algeria (1.7 million bpd) and Egypt (750 thousand bpd)<sup>3</sup>. In addition, a number of new oil producers have surfaced in recent years – namely Ghana, Niger, Chad and Uganda – with a few more in the making (including Ethiopia, Somalia and Niger). Furthermore, massive natural gas reservoirs have been discovered off the Eastern coast of the continent, as well as large coal deposits in Mozambique, and huge uranium reserves in Namibia and Niger.

This picture is further complemented by Africa's endowment in non-fuel minerals, in which Southern Africa appears as a prize. South Africa and Zimbabwe are leading producers of platinum. South Africa is also a leading producer of manganese (with 75% of the world's reserve base) and holds massive deposits of gold, copper and nickel, among others. The Copperbelt Region, spanning across Zambia, the Democratic Republic of Congo (DRC) and Angola, holds vast deposits of copper and cobalt. Africa also has large untapped iron ore deposits, predominantly located in West Africa and scattered across a number of countries, namely Gabon, Guinea, Liberia and Sierra Leone.

In this context, it comes as no surprise that Chinese oil and mining SOEs have acquired numerous oil and mining assets on the continent over the past decade. Currently China has oil equity in Sudan (where the China National Petroleum Corporation or CNPC has a dominant position in the sector) and in a number of other key oil-producing countries, including Angola, Equatorial Guinea, Ethiopia, Gabon, Chad, Uganda and Libya. Chinese national oil companies (NOCs) are also prospecting for oil in several other African countries (namely Niger, Tanzania, Ethiopia, and São Tomé & Príncipe). Further, Chinese mining companies have made significant inroads into a number of African countries, including Guinea, Liberia, the DRC, Zambia, Zimbabwe and South Africa.

A significant part of these assets have been directly or indirectly secured through the extension of concessional loans for infrastructure. Throughout the past decade China has made extensive use of this type of *economic statecraft* to secure long-term supply and access to resources assets.

<sup>3</sup> All figures in this paragraph are according to All workbook of *BP Statistical Review of Energy 2012*. Available at: <<http://www.bp.com/statisticalreview>, accessed 15 July 2012>.

## China's foreign aid, economic statecraft and African mineral resources

Economic statecraft can be defined as 'the use of economic instruments by a government to influence the behavior of another state', and often involves the use of sanctions or inducements (Blanchard, Mansfield and Ripsman 2000). Negative economic statecraft involves the use of economic sanctions, coercion or punishment (known as 'sticks', i.e. trade or investment restrictions, financial sanctions, and assets seizure) to interfere with the economy of the target, so as to force a change in its behaviour. Positive economic statecraft, on the other hand, involves the extension of economic incentives or rewards (known as 'carrots', i.e. trade and investment promotion, financial incentives, and technology transfer) in return for compliance with more diverse foreign policy goals.

The People's Republic of China (PRC) does not have a record of making use of negative economic statecraft tools, either in bilateral or multilateral relations. Since its accession to the UN Security Council (UNSC) in 1971, it has typically abstained from voting on economic sanctions resolutions. On the other hand, Beijing has made frequent use of economic inducements in pursuing its foreign policy goals since the founding of the PRC.

A significant part of Chinese positive economic statecraft falls under the category that Beijing officially designates as foreign aid (PRC 2011). Chinese foreign aid dates back to the early days of the PRC in the 1950s, when Beijing started channelling economic aid and technical assistance to communist countries (first to Vietnam and North Korea and then to newly independent African countries) seeking political allegiance. Unlike North-South co-operation, from the outset Chinese aid has had a very distinctive pragmatic nature rooted in the core principles of equality, non-conditionality, common development and mutual benefit. Chinese aid assumes many different forms, including technical co-operation, human resource development, medical aid, emergency humanitarian aid, overseas volunteer programmes, debt relief and financial aid. Chinese authorities presently distinguish between three types of financial aid: grants, interest-free loans and concessional loans (PRC 2011). The first two are sourced from China's state finances, whereas the last is provided by the Export-Import Bank of China (China Exim Bank)<sup>4</sup>.

In the past, concessional loans for infrastructure have been used by China as a foreign policy instrument (e.g. the Tazara railway), with overall positive outcome for China's political aims in Africa in the 1960s and 1970s. After a long break, the use of concessional loans as a foreign policy instrument resurfaced in the late 1990s (Hubbard 2007). Unlike the 1970s, the goals behind this type of economic inducement are now primarily economic.

Even though China Exim Bank's concessional loans also target industry, resources development and agriculture, they are primarily earmarked for infrastructure construction. Evidence suggests that a substantial part of concessional loans have been used by China as a positive economic statecraft vehicle to access resources (such as oil, minerals and other commodities), hence the name 'infrastructure-for-resources' deals.

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4 China Exim Bank was created in 1994. It is fully owned by the Chinese government, and is under the direct leadership of the State Council. It plays an important role in promoting foreign trade and economic co-operation, acting as a key channel of policy that finances the Chinese import and export of mechanical and electronic products, equipment and technologies, and in undertaking offshore construction contracts and overseas investment projects by Chinese companies.

## Unpacking China's infrastructure-for-resources loans

In general terms, this type of loan is rooted in two legal instruments: a framework co-operation agreement signed by the two governments stating the general terms (volume, purpose, interest rate and maturity) and a loan agreement signed by China Exim Bank and the borrower. What makes these loans concessional is that their interest rate (at 1.5% to 3%) is below the benchmark of the People's Bank of China, with the difference being subsidised by the central government. The reimbursement period is relatively long (up to 15-20 years, including a 5-7 years' grace period) (PRC 2011). Working as an export credit facility, these credit lines are tied to the procurement of services, goods and labour in China (minimum of 50%), usually leaving only a small margin for local content in the target country. The capital never actually leaves China. It is administered on a project basis through the borrower's account with China Exim Bank, and payments are made directly to Chinese contractors after concluding the construction project.

Meaningfully, although only 9% of these loans have targeted resources development, there is a clear geographic overlap between China's infrastructure commitments and its resource investments in Africa. Up to 2008, China had infrastructure finance commitments in 35 countries across sub-Saharan Africa. Three of these countries (Nigeria 34%, Angola 20% and Sudan 8%) alone account for nearly two-thirds of the total value of China's infrastructure financial commitments on the continent (Foster 2008).

Often, these loans are secured by resources. The main reason for this is that China's concessional loans require a sovereign guarantee, which is largely problematic in developing countries owing to their low creditworthiness. In resource-rich countries, China has solved this by locking proceeds from the sale of oil or mining from the borrowing country to secure the loan. In most cases, this locked revenue originates from the sale of the specified commodity to a Chinese SOE. In most cases (e.g. Angola), the borrowing country resource parastatal has been placed as the guarantor of the loan. Although most contracts refer to a given volume of oil or mining to service the loan, it is agreed that this figure will in fact fluctuate according to the moods of market prices, which may imply adjustments to the term of the loan<sup>5</sup>.

### Infrastructure-for-resources loans in Africa

It should be noted that commodity-secured financing in Africa is by no means a Chinese invention. This mechanism dates back to the early and mid-1990s, to a large extent motivated by the African context of capital shortage and low creditworthiness of most countries but strong background as commodities exporters. This formula was first developed in London by a plethora of Western private banking institutions (British, French, Dutch and later South African) to mitigate the risk of lending to resource-rich African governments (e.g. Angola) or in funding the development of specific mining projects on the continent (e.g. the Lumwana copper mine in Zambia and the Golden Pride gold mine in Tanzania)<sup>6</sup>. A number of public banking institutions

<sup>5</sup> Personal interview, Angolan oil sector expert, Luanda, Angola, 1 February 2011.

<sup>6</sup> For a detailed study on commodity-backed finance in Africa, see JIBC London Office (2006).

have also adopted this financing model in Africa. This is the case with the Brazilian Development Bank (BNDES), which has as a similar credit facility with Angola, and is seeking to extend this financing model to Mozambique (coal) and Ghana (oil)<sup>7</sup>.

The key difference in China's model is that the financing mechanism is entirely a state set-up, knitting together the government in Beijing, its policy banks and resources SOEs. Additionally, although standard commodity-backed finance loans are secured against mining or oil exports regardless of the off-taker or final destination, in China's model they are either secured by oil exports to China or, if a mining deal, the off-taker is normally a Chinese company. Furthermore, Chinese resource companies' penetration in Africa appears to be associated closely with the extension of this type of loan in a number of cases.

If one looks at the evolving patterns of China's infrastructure-for-resources loans in Africa throughout the past decade, two different periods seem to emerge, clearly separated by the advent of the global economic crisis in late 2008.

## Infrastructure-for-resources deals before the onset of global economic crisis

The first countries to receive infrastructure-for-resources loans were oil-rich countries, namely Angola, Sudan and Nigeria. The blue print of these infrastructure-for-resources loans was carved out in Angola in 2004. The deal included a loan of \$2 billion (a second batch of \$2.5 billion was extended in 2007) by China Exim Bank for infrastructure development listed in Luanda's public works budget. This loan was to be repaid with the proceeds of oil sales from Sonangol (the Angolan national oil company) to a Chinese company, UNIPPEC (China Petroleum & Chemical Corporation, or Sinopec, trading). Even though the infrastructures to be built with the loan (such as water and electricity supply, transportation and housing) were not directly related with the oil industry, which is located largely offshore, the deal undoubtedly paved the way for Sinopec to enter Angola's oil sector. Tellingly, Sinopec acquired its first equity stake in the Angolan oil industry that same year. The asset in question (50% of Block 18) was being sold by Shell to the Indian ONGC, when Sonangol decided to exercise its right of first refusal and sell it instead to a joint venture (JV), Sonangol-Sinopec International, which it had established in the meanwhile with Sinopec (Alves 2010).

Under the leadership of Olusegun Obasanjo (1999-2007), Nigeria also embraced Chinese infrastructure-for-oil deals, reportedly totalling \$12 billion<sup>8</sup>. Chinese NOCs (the CNPC, China National Offshore Oil Corporation or CNOOC, and Sinopec) obtained access to their first stakes in the Nigerian oil industry in exchange for engaging in major infrastructure projects. These included the rehabilitation of Kaduna oil refinery (\$2 billion) by the CNPC, the Lagos-Kano 1 350 km railway and Mambilla hydroelectric station, with funding from China Exim Bank (\$2.5 billion) partly backed by Nigerian oil blocks<sup>9</sup>.

7 Personal interview, BNDES International Department, Rio de Janeiro, Brazil, 23 may. 2012.

8 Personal interview, China Exim Bank representative, Beijing, China, 26 August 2009.

9 For a detailed study on China's engagement in Nigeria, see Mthembu-Salter (2009).

Only at a later stage did China begin its outreach to minerals producers based on similar package deals aimed at funding mining projects (greenfield) and related infrastructures in exchange for mining concessions and minerals supply. The largest ones were signed with Gabon and the DRC.

In 2006 the Gabonese government granted a Chinese consortium led by a construction company (China National Machinery and Equipment Corporation, CMEC) the right to develop Belinga mine, allegedly containing one of the largest-known untapped deposit of iron ore in the world<sup>10</sup>. The \$3 billion deal, to be financed by China Exim Bank and to be repaid with revenue from the exploration of Belinga mine, includes the construction of a new 560 km railway line linking Belinga to the Transgabonais, a deepwater mining harbour at Santa Clara, a hydroelectric dam and a steel mill in exchange for exploration rights through the establishment of a JV (Compagnie Minière du Belinga, COMIBEL) in which the Chinese own 75% plus the off-taker rights.

In September 2007 China signed a similar deal with the DRC. The initial \$5 billion loan was increased to \$9 billion in January 2008. Under the agreement, \$6 billion would be allocated in the first phase to the rehabilitation and construction of infrastructure and \$3 billion to mining exploration. The projects include a 3.400 km highway, a 3.200 km railway linking Katanga's mining province to Matadi port in the Congo River estuary, 31 hospitals, 145 health centres, two universities and 5.000 housing units (Bavier<sup>2007</sup>). A JV named Sicominex was set up between the Congolese state miner, Gecamines, Sinohydro and the China Railway Engineering Corporation (CREC). The JV, 68% owned by the Chinese part, will undertake the infrastructure and the development of two mining concessions (copper and cobalt) in Katanga province (Bavier 2008). The loan is to be repaid with revenue obtained from the exploration of these concessions.

It is interesting to note that whereas infrastructure-for-mining deals gave Chinese SOEs direct access to mining assets (e.g. the DRC and Gabon), in infrastructure-for-oil loans oil equity was not part of the deal but was acquired in parallel (e.g. Angola and Nigeria). This has produced some confusion among analysts. In the first case, the loan is structured around the development of a specific mining project that entails the construction of supporting infrastructure. As part of the deal, a designated Chinese SOE assumes a dominant shareholding position, normally in a JV with a parastatal from the borrowing government. In most cases, the Chinese partner also retains the off-taker rights, considering that the proceeds from that sale are to be used to service the loan, mitigating by these means the repayment risks.

In the second case, following commodity-secured financing market practices, Chinese loans for infrastructure that are not linked to mineral assets exploration have targeted primarily oil-rich countries with an established producing capacity. These loans are often secured against oil exports to China from blocks that are already on-stream. Although no access to oil equity was included in the loan contracts, in most cases Chinese NOCs acquired assets in parallel to these deals, often benefiting from receiving government's favour, sparing them from having to compete directly with the more experienced and much better equipped (in terms of technology and expertise) international resource companies.

<sup>10</sup> For a detailed study on China's engagement in Gabon, see Dittgen (2008), Alves (2008).

However, although China's eagerness to provide cheaper and unconditional loans and willingness to embrace large infrastructure projects neglected by Western donors has represented a valuable competitive advantage for Chinese companies in Africa (helping to offset their latecomer status on the continent), it has not always produced the desired outcome.

This is the case with the DRC, where project development has been delayed by traditional donors' pressure to renegotiate the contract, which had the loan reviewed and reduced to \$6 billion in 2009 under Kinshasa's request<sup>11</sup>. Currently the new contract signed in 2009 is only partially under implementation, as the bulk of the loan is yet to be released, pending approval by the relevant authorities on both sides<sup>12</sup>. In Gabon, the Belinga project has been postponed repeatedly due to persistent disagreements (regarding labour and environmental issues) and calls for renegotiation of the contract, perceived by civil society as too favourable to China. The global commodity price volatility and the changing domestic political context (with Omar Bongo's death) have also added new risks and costs for the Chinese (Dittgen 2011). As of late 2012, rumours have been circulating in the media that Ali Bongo has been courting BHP Billiton and Vale to take over the project (Agence France Press 2012).

Lastly, in Nigeria, most Chinese oil exploration contracts awarded by Obasanjo and loans signed under his rule were frozen by his successor, Umaru Musa Yar'Adua, immediately after the elections in 2007, followed by an ongoing review of the Nigerian oil industry regulatory framework. The experience in Nigeria's oil sector has exposed the vulnerability of Chinese intra-governmental approach to regime change. Even in countries where the same regime remains in power, such as Angola and Sudan, China's oil interests in these countries have been affected by other problems (including a souring of relations with Sonangol in Angola and South Sudan independence).

## Infrastructure-for-resources loans within the global economic crisis framework

The difficulties discussed and the volatility in commodities markets deriving from the onset of the global economic crisis at the end of 2008 coincided with a temporary halt in large-scale infrastructure-for-resources lending. That no large credit lines were extended by China to African countries in 2009 and 2010 (contrasting with the massive loans that China extended to NOCs in Brazil, Russia and Kazakhstan in this same period) suggests that Beijing took a step back to evaluate the situation here. However, mounting financing difficulties of some resource-rich African countries in the context of the global economic crisis compelled its leaders to knock at China's door for funding. It is in this context that a new batch of infrastructure-for-resources loans was announced in 2011 and 2012. A number of shifts are, however, noticeable as regards the general pattern of previous loans.

<sup>11</sup> Personal interview, China Exim Bank representative, Beijing, China, 26 aug. 2009.

<sup>12</sup> For more detail, see Jansson (2011).

Table 2 – China’s major resources-for-infrastructure loans (pledged), 2006-2012

Country	Guaranty	Main funded projects	Pledged concessional loan	Year and bank
Nigeria	Oil	General infrastructure	\$ 3 bn	2012 China Development Bank (CDB)/China Exim Bank (under negotiation)
Angola	Oil	General infrastructure	\$3 bn	2011 China Exim Bank
Ghana	Oil	General infrastructure	\$ 3 bn	2011 CDB
Angola	Oil	General infrastructure	\$2.5 bn \$2 bn	2007 China Exim Bank 2004 China Exim Bank
DRC	Cobalt	Mine development and related infrastructure	\$5 bn (extended to \$9 bn in January 2008, reduced to \$6 bn in August 2009)	2007 China Exim Bank
Gabon	Iron ore	Mine development and related infrastructure	\$3 bn	2006 China Exim Bank

Source: CRS (Congressional Research Service) (2009)

The same year that Ghana became an oil-producing country in 2010, Accra signed a loan agreement of \$3 billion with the CDB, the repayment of which will be secured by oil sales. It should be noted that in 2007, before the oil bonanza, China Exim Bank had already extended a similar credit facility to this country in the form of \$292 million to fund a hydroelectric project, which was to be repaid with proceeds from cocoa exports. After a fierce domestic discussion, the infrastructure-for-oil agreement was finally approved in parliament in August 2011 and the first tranche of \$1 billion was cleared for disbursement in April 2012. This initial batch was to fund the gas infrastructure project linked to the Jubilee field (the onshore-offshore pipeline and the gas processing plant) and the ICT infrastructure for its surveillance (Verma 2011). The remaining \$2 billion, to be disbursed in 2013, was allocated for the development of harbour facilities, railway lines and agriculture projects. Although Chinese oil companies did not obtain any hard assets as collateral, they did enter the sector downstream. Sinopec is building the gas pipelines and in 2012 UNIPPEC took charge of the marketing of Ghana’s share of crude oil from the Jubilee field – reportedly part of the conditions for the CDB loan (Kunateh 2012).

Further, China Exim Bank is allegedly negotiating an additional \$6 billion credit facility with Ghana for social infrastructure (including roads, railroads, education, electricity and water supply) (Dzawu 2012), which is also expected to be repaid with future oil revenue. Although these agreements were highly contested by the opposition during the 2012 election campaign (Wallis and Barber 2012), the election victory for the incumbent president, John Dramani Mahama, suggests that Chinese interests in Ghana will remain on track for the foreseeable future.

In 2011 China Exim Bank extended another \$3 billion infrastructure credit facility to Angola backed by oil. This time, however, it did not produce any collateral assets for Sinopec. The Angolan government, now enjoying a much stronger bargaining position vis-à-vis China (owing to its wide variety of financing sources), made it crystal clear that Chinese access to oil equity stakes in Angola and Chinese loans to Luanda were to be dealt with separately (Alves 2012).

Despite the bitter previous experience in Nigeria, it was announced in February 2012 that Lagos was negotiating a \$3 billion loan with China Exim Bank and the CDB for the completion of various projects in the fields of transportation, aviation, education and agriculture (Ahmed 2012). Moreover, in 2011, the Nigeria National Petroleum Company reportedly signed a memorandum of understanding (MoU) with China State Construction Engineering Corporation (CSCEC) for the construction of three greenfield refineries and a petroleum complex. The project investment reportedly amounts to \$28.5 billion and is to be financed by a consortium of Chinese banks. The CSCEC-led consortium is to retain an 80% controlling stake in the projects until costs are recovered (Sharife <sup>2011</sup>) Given Nigeria's background, one should expect that both credit facilities, if enacted, will be guaranteed by Nigeria's main revenue source: oil.

A number of other loans are reportedly in the pipeline. In late April 2012, during President Salva Kiir's visit to Beijing, South Sudan announced it was negotiating an \$8 billion loan with China for infrastructure, including road construction, agriculture, hydroelectric plants and telecommunications (Sudan Tribune 2012). The conditions of the loan or the Chinese bank providing the credit line were not disclosed. This announcement, however, was yet to be confirmed by Chinese authorities at the time of publication. Among the countries that have been courting Beijing for infrastructure loans is South Africa. South Africa's Industrial Development Corporation, a state investment agency, is said to be in talks with China for a loan to fund part of its \$12.75 billion infrastructure programme covering the next five years (Reuters 2012), South African oil company, Petro South Africa, is also said to be in talks with Sinopec for the construction of a world-class \$10 billion crude-oil refinery in Port Elizabeth (Roelf <sup>2012</sup>).

However, this renewed African appetite for Chinese cheap infrastructure loans represents a double edge sword for Beijing. Chinese loans allegedly under negotiation with East African countries earmarked for contentious dams and irrigation projects in highly volatile border regions (i.e. Lake Turkana) threaten to drag China into African regional conflicts, which would seriously harm its interests in Africa (Bossard 2013).

It should be noted that over the past decade China has also extended a number of smaller preferential credit lines for infrastructure to many other African states. Among those benefiting are Tanzania (in 2009, \$400 million to build a coal power plant) (Steelguru <sup>2009</sup>); Zimbabwe (in 2011, \$700 million for agriculture machinery, medicines and water sanitation) (Dzirutwe 2011); and Mozambique (in 2012, \$300 million to build a ring road around Maputo). Even though these credit lines are not guaranteed by resources supply, one cannot help noting that these countries are also well endowed with natural resources.

If, on the one hand, infrastructure-for-resources loans seem to have been relatively successful throughout the two periods in locking future supplies through the resources-exports guarantee mechanism, on the other hand, it appears that the acquisition of resources assets through this instrument has met with limited success. Most of the equity acquired (directly or as collateral) in the framework of infrastructure-for-resources loans extended before the global economic crisis – namely the oil blocks in Nigeria; the Belinga iron ore project in Gabon; and the cobalt mines in Katanga, the DRC – are yet to start producing, or have been or are about to be lost. The only exception is 50% of Oil Block 18 in Angola acquired by Sinopec as collateral to the 2004 China Exim Bank loan, which is actually among the largest-producing blocks in the country.

As for the second batch of these barter deals, there are a few notable new trends, namely, they have targeted exclusively African oil-rich countries and thus far have not produced a single hard asset (directly or collaterally) for Chinese companies.

## The New Wave: Direct Acquisition

Although Beijing seems to still regard the extension of soft loans to well-endowed African states as a valuable positive economic statecraft instrument in its quest for resources security in Africa, its companies appear to be increasingly confident in venturing out on their own in the continent.

In fact, the assets acquired by Chinese resources companies that do not participate in these deals appear to have been far more consequential. The first resource equity acquired by Chinese SOEs in Africa (the CNPC oil blocks in Sudan in 1996 and China Non-Ferrous Metals Mining Group or CNMC copper mines in Zambia in 1998) were greenfield projects that pre-dated Chinese infrastructure-for-resources loans. Having started their internationalisation prior to the official launching of the 'go out policy', these companies acted on their own without much backing from the Chinese state at the time. However, Beijing's ulterior active involvement in infrastructure funding in both countries has surely contributed to cementing the position of its resources SOEs by enhancing the good will of the governments in Khartoum and Lusaka.

It was not until the onset of the global economic crisis in late 2008 that Chinese resources SOEs managed to access other meaningful assets in Africa – this time mostly through mergers and acquisitions (M&A). Indeed, the crisis opened an unprecedented window of opportunity for Chinese resource companies. In a context of contracting liquidity in international financial markets, Chinese SOEs were well positioned to make the most of their best competitive advantage, namely their unmatched financial capacity, largely rooted in Beijing's massive foreign exchange reserves.

Sinopec's takeover of Addax Petroleum in 2009 was the largest ever overseas successful acquisition by a Chinese company. The acquisition of the Swiss-based company (listed in London and Canada) has given Sinopec access to sizeable oil and gas equity. Proven and probable reserves are estimated at 537 million barrels and annual production at seven million tonnes per year in 2009 (143.000 bpd); with 72% originating from Nigeria, 20% from Gabon and 8% from the Kurdistan region in Iraq (Brunswick Group 2009).

Of the three major Chinese NOCs, CNOOC has been particularly active in attempting to expand its equity in Africa in recent years. Indeed, CNOOC has targeted not only the two largest producers in sub-Saharan Africa (Nigeria and Angola) but also the newest oil-producing countries (Uganda and Ghana), having pursued different strategies. Whereas in Ghana, CNOOC attempted a partnership with the national oil company (Ghana National Petroleum Corporation) to buy the Kosmos 23.5% stake in the Jubilee field<sup>13</sup> (which was declined by Kosmos in March 2011), in Angola it attempted a joint bid with another Chinese NOC (which was blocked by the Angolan government in September 2010). In Nigeria CNOOC has been courting Lagos hoping to benefit

<sup>13</sup> Jubilee field was discovered in June 2007 and has estimated reserves of 1.8 billion barrels. Ghana expects to pump 500.000 barrels of oil a day by 2014. The Cosmos stake was being sold to Exxon (at a cost of \$4 billion) but was blocked by Ghana's government. The government was interested in raising its 13.8% stake but lacked the necessary capital to do so.

from the revision of the oil bill aimed at asserting the state's control over the hydrocarbons industry. CNOOC is eyeing the blocks in the Niger Delta owned by Western international oil companies (IOCs), from where 20% of Nigeria's oil output originates (Reuters 2009). CNOOC's massive bid for the blocks services the bargaining strategy of the Lagos government vis-à-vis the IOCs, and in face of the recoil of the IOCs, it is likely that not only CNOOC but other Chinese NOCs may see their acreage expand in the new regulatory context. In Uganda in February 2012, CNOOC confirmed its entry visa out of Kampala's attempt to avoid Tullow's monopoly over the country's oil resources<sup>14</sup>. CNOOC now has a one-third stake in the oil project, whose development is valued at \$20 billion, including a refinery and a pipeline to the Indian Ocean (Mombasa). Oil production is expected to start in 2013 and output to reach 200.000 bpd (Lee and Poon 2009).

The acquisition road, however, has not always been smooth. Over this period a number of Chinese oil acquisitions have met with failure. This was the case with the CNOOC-CNPC bid for Marathon's 20% share in Oil Block 32 in Angola, and the CNPC attempt to take over Venerex oil assets in Libya, both of which were blocked by host governments, allegedly to avoid assets being bought below their real value in the context of low oil prices.

Nevertheless, as shown in Table 3, Chinese SOEs have made significant inroads into Africa's resources in the context of the global economic crisis, particularly so in the mining sector. Some of the largest deals over the last couple of years have been signed over iron ore deposits in Western Africa. In March 2010, Chinalco acquired 47% of the Simandou project (in Guinea) from Rio Tinto (in which Chinalco already had a 9% stake) for \$1.4 billion. Simandou is located in a remote area of the country and has estimated deposits of 2.5 billion tonnes of iron ore (Smith and Macnamara 2010). In Sierra Leone, African Minerals joined with Chinese companies to finance the development of Tonkolili iron ore mine, which has estimated reserves of 9.7 billion tonnes of iron ore (Sierra Express Media 2010). China Railway Materials acquired 12.5% of African Minerals for \$250 million in March 2010, and a few months later an agreement was signed with Shandong Iron & Steel Group to inject \$1.5 billion for a 25% stake in the project (Mining Journal 2010). African Minerals signed off-take agreements with both companies, enabling them to buy iron ore at discounted prices. In October 2011 the Sichuan Hanlong Group, with the backing of the CDB, signed a \$1.6 billion agreement to take over Australian Sundance Resources Ltd, owner of the Mbalam iron ore project, cutting across Cameroon and Congo. The takeover, recently downsized to \$1.45 billion owing to weak iron ore prices (Hernandez 2012), is expected to be finalised in the first quarter of 2013 after approval by competent authorities from all parties involved. If implemented this will give Hanlong control of the \$4.7 billion Mbalam rail, port and mine development project. The company is having talks with several SOEs to form a JV in order to build infrastructure. The high prices cycle of minerals over the past decade has made remote deposits profitable and Chinese state miners have a competitive edge to fund the mine development and the attached railroads and ports, as they can access cheap capital from Chinese state banks and tap into a large pool of experienced construction SOEs that can help to build the necessary infrastructure cheaply and quickly.

<sup>14</sup> The government has allowed Tullow to take over Heritage Oil (UK) assets in Uganda (50% stakes in two blocks in Lake Albert) with the commitment that it will sell two-thirds of its oil assets in the country to other companies (i.e. to CNOOC and Total as of March 2010).

Over the last year Chinese miners have also been increasingly active in Southern Africa, showing particular interest in the Copper Belt Region (Zambia-DRC). In July 2011 the nickel mining company, Jinchuan Group, outbid its Brazilian competitor, Vale, and acquired Meteorex for \$1.3 billion. Meteorex, a South African miner, holds significant copper and cobalt assets in the DRC's Katanga province and Zambia's Copperbelt. The company also owns other prospective projects for base metals in the DRC (I-net bridge 2011). After halting the acquisition of Equinox Minerals in early 2011, Minmetals finally acquired its first mining acreage in Africa, paying \$1.3 billion for 90% of Canada-listed Anvil Mining, which owns Kinsevere and Mutoshi copper and cobalt projects in the DRC. The deal was sealed in January 2012 after clearance from regulators in all countries involved. In early 2012 Minmetals announced that it was on the lookout for copper, zinc and nickel acquisitions in the region of up to \$7 billion (Sonali 2012). In February 2012 the China Non-Ferrous Corporation Africa, a subsidiary of the CNMC, announced a further \$832 million investment to develop the South-East branch of its Chambishi copper mine.

**Table 3 – Major Chinese investments in oil and mining in Africa, 2009-2012**

Target country/asset	Date	Chinese Company	Acquisition	Value
DRC Kinsevere copper mine	February 2012	Minmetals	90% stake in Anvil Mining	\$1.3 bn
Uganda oil assets in Lake Albert	February 2012	CNOOC	One-third of Tullow's oil assets in Lake Albert	\$1.5 bn
Zambia copper	February 2012	CNMC	Development of Chambishi south-east	\$830 mn
Cameroon & Congo Mbalam iron ore project	October 2011	Sichuan Hanlong Group	100% in Sundance	\$1.6 bn
DRC and Zambia copper and cobalt mines	July 2011	Jinchuan Group	100% in Meteorex	\$1.39 bn
South Africa gold	June 2011	Two Mining Companies	65% stake in Aurora Holdings Ltd	\$ 60 mn
South Africa gold	April 2011	Wing Hing International	87% in Taung Gold	\$ 986 mn
Sierra Leone iron ore	May 2011	Shandong Iron & Steel	25% in Tonkolili iron ore project (the remaining 75% is owned by African Minerals)	\$1.5 bn
Guinea iron ore	March 2010	Chalco (Chinalco)	47% in the Simandou project (the remaining 53% is owned by Rio Tinto)	\$1.4 bn
Sierra Leone iron ore	January 2010	China Railway Materials (CRM)	12.5% stake in African Minerals (Tonkolili iron ore)	\$244 m
Zambia copper	December 2009	CNMC	Additional investment to rehabilitate Luanshya copper mine	\$150 m
Kenya oil	October 2009	CNOOC	Secured exploration well in North Kenya	\$26 m
Zambia nickel	August 2009	Jinchuan Group	70% stake in Munali mine (the remaining 30% is owned by Albidon)	N/A
Nigeria Gabon oil	August 2009	SINOPEC	Takeover of Addax Petroleum (Swiss) with significant oil equity in the Gulf of Guinea	\$7.2 bn
South Africa chromites	July 2009	Minmetals	70% stake in Vizirama	\$81 m
Liberia iron ore	June 2009	China Union	Bing Iron ore mines	\$2.6 bn
Zambia copper	June 2009	CNMC	Luanshya mine rehabilitation	\$400 m

Source: Beijing Axis, The China Analyst, may 2009, september 2009 and january 2010; various news reports.

Chinese companies have shown an interest in a number of other mining deals in the region. In Namibia, the China Guangdong Nuclear Power Group (China's second-biggest nuclear reactor builder) has shown a particular interest in Husab mine (set to become the world second-largest uranium mine when operations start to be run). Since early 2011 the group has been trying to acquire (in a \$1 billion bid) a stake of London uranium miner Kalahari Minerals, which owns a 42.7% share in Australian Extract Resources, the company that holds the concession for Husab mine. Kalahari also holds interests in gold, copper and other base metals in Namibia (Ebrahimi 2011). In Zimbabwe, the government announced in November 2011 that it had signed deals worth over \$700 million with various Chinese investors, mostly involving the extraction of chrome and alluvial diamonds (The Herald 2011). Moreover, Wuhan Iron & Steel Company signed agreements with the China-Africa Development Fund to invest jointly in African mining companies. In recent years Chinese, state miners have acquired a number of African mining companies via the London Stock Exchange (LSE). This trend is explained by the companies being listed on the LSE to some extent curbing some of the risk involved in buying African companies as compared with Australian or US companies.

In Africa, Chinese companies are interested primarily in iron ore and copper from a strategic supply perspective (China consumes over half of the world's iron ore output and 40% of its copper). The rush in iron ore deals in West Africa reveals China's proactive stance in ensuring a continuous iron supply in a market that is dominated by Vale, BHP Billiton and Rio Tinto. China, the largest steelmaker in the world, expects that off-take agreements and the increasing engagement in iron ore production will give Beijing a greater say in iron ore prices, which until now have been tightly controlled by the three mining moguls. In West Africa one should expect greater interest in iron ore deposits in Liberia, Gabon and Congo-Brazzaville, since these governments are seeking to tie the exploration of their mineral resources to the development of related infrastructure.

In Southern Africa, Chinese mining companies have targeted mostly Zambia and the DRC for their copper deposits. But interest is also rising in zinc, nickel, uranium and gold projects. It is interesting to observe that no sizeable investments have been made so far by Chinese SOEs in the South African mining sector. Chinese state miners have been struggling to penetrate this market owing to its far more liberalised and complex socio-economic institutional structure. South Africa's far more regulated environment and stronger labour unions are significantly less permeable for China's business practices and funding model, rooted in a high percentage of procurement of Chinese services, materials and labour.

Unlike the experience in South America, where a significant part of M&As by Chinese companies over the past couple of years have taken place in the oil industry, in Africa the Chinese M&A spree has been particularly fruitful in the mining sector. To a great extent this has been possible thanks to a structural change in the international market prompted by the 2008-09 global financial crisis, as a consequence of which oil and mining developers were forced to place equity stakes on the market or look out for mergers to finance their operations. In this new framework, Chinese mining SOEs suddenly found themselves in an advantageous position, as they were among the few players with cash flow to enrol in M&A operations.

This may also explain recent progress by Chinese NOCs in their attempt to penetrate the fast rising natural gas industry in the region as the operators look for partners to fund the

estimated \$50 billion necessary to develop the new found natural gas reservoirs off the coast of Mozambique and Tanzania. In early 2013, CNPC was reportedly in negotiations with the Italian oil company ENI to buy a 20% stake in a gas block in Mozambique for \$4 billion (Zijing 2013). This would be CNPC largest acquisition in the hydrocarbons industry in Africa and would give China a foothold in one of the largest known natural gas deposits in the world.

M&As appear to be a better fit for Chinese companies' interests, as they greatly reduce time to develop assets and allow the companies to benefit from established management experience and to obtain the required technology and expertise. In Africa, the M&A operations of Chinese state miners seem to be targeting controlling or large stakes, which is in line with Beijing's will to break free from foreign suppliers and to have more control over commodity prices. This, however, might be a risky strategy in the medium to long run, as China may be in danger of overstressing its capacity to develop all these new projects smoothly. This is particularly true when considering these operations are taking place in such a dissimilar and unstable environment as the African continent. Chinese SOEs come from a highly protected market at home, where they enjoy substantial support from the government and therefore are not used to operating in environments of open competition. The cultural shock (in terms of language, business and work ethics) is also an obstacle that has been underestimated; along with the incertitude of mining regulatory environments, which are under revision in most commodity-rich African countries in light of the current mainstream 'resources nationalism' doctrine. As Chinese companies have already experienced in Gabon and the DRC, being overly optimistic may lead to cost overruns and delays. This is particularly true in a context in which demand growth for mineral commodities is likely to slow down owing to the expected overheating of China's economy.

## Conclusion

As a latecomer and still lagging far behind in terms of technology and expertise of its Western competitors, Chinese resource security strategy in Africa has relied heavily on Beijing's positive economic statecraft in its initial stage, not only to secure steady supply but also to lock in assets. Although infrastructure-for-resources deals seem to have been relatively successful in ensuring a steady supply of resources over the loan repayment period through the guarantee mechanism, access to hard assets through this instrument has been far less consequential than expected, with most of the assets acquired yet to begin production. In sharp contrast, direct acquisitions by Chinese resources SOEs throughout the global economic crisis seem to have been much more successful in expanding the Chinese oil and, particularly, mining SOEs footprint in the continent.

The announcement of a new batch of infrastructure-for-oil loans over the past couple of years (in Angola, Ghana and Nigeria) suggests that this economic statecraft instrument remains; nonetheless, an important tool for China to secure, if not equity stakes, surely a steady supply of oil in the medium to long term (that is to say, over the standard repayment period of 10-15 years). A few shifts, however, should be highlighted.

Unlike the previous batch of loans, the new ones have been extended exclusively to oil-rich countries. This seems to suggest that, following the difficulties faced in Gabon and the DRC,

China has become somewhat fearful of deploying this economic statecraft instrument to develop complex mega-mining 'greenfield' projects. In fact, even if less effective in giving China access to equity (the new loans have not produced any collateral oil assets for China), infrastructure-for-oil loans appear to be much easier to manage, more effective in terms of locking in supply and also more reliable as a resource-backed financing instrument. On the other hand, framed by the lingering contraction of global financial markets, Beijing has been increasingly faced by African resource-rich countries knocking on its door in search of funding for mega infrastructure projects, some of which, however, risk pulling Beijing into the centre stage of African conflicts.

This new batch of loans also suggests that China is adopting a more flexible and diversified approach to financing African oil-rich countries. In recent years the CDB (most active in South America and Central Asia, providing loans directly to NOCs) has become more proactive in Africa in providing loans for infrastructure to oil-rich countries (as in the case of Ghana and Nigeria), which are not always backed by oil sales (as in the case of Angola, which received a \$1.5 billion loan in 2011 from the CDB). The CDB has also introduced some nuances to China Exim Bank's commodity-backed financing in Africa, as, although offering low interest rates (at 6.5%), its credit lines are not concessional. In addition to serving as a tool to open markets for Chinese construction companies and for resources SOEs to engage in downstream (refineries) and midstream (oil and gas pipelines) projects (in Ghana and Nigeria), part of these loans are now also targeting other sectors, namely health and agriculture, signalling increasing diversification.

With the onset of the global economic crisis, access of Chinese SOEs to mining and oil assets in Africa has clearly become more detached from infrastructure-for-resources loans. Chinese state miners have been particularly effective in this regard. Moreover, Chinese miners have clearly moved from greenfield investments in marginal deposits (e.g. the Chambishi copper mine in Zambia and oil assets in Niger) and producing areas marginalised by Western companies (e.g. Zimbabwe and Sudan) to M&As targeting more conventional areas (such as Addax and most of the mining assets acquired over the crisis).

On the one hand, infrastructure-for resources loans have become less relevant in facilitating the access of Chinese SOEs to equity assets. However, on the other hand, the Chinese state still plays a critical role in the expansion strategies of the SOEs, as it remains a critical source of financing. Nonetheless, and even though the unmatched financing capacity of Chinese SOEs has given them a competitive edge over their competitors in the context of global financial contraction – particularly in capital-intensive industries, such as mining and oil – in the long run the success of Chinese SOEs will still depend on their capacity to efficiently develop these new assets in such a volatile environment.

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