
Securing Energy and Mineral Resources for China: Debating the role of markets

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“China’s Growing Natural Gas Insecurity and the Potential of Chinese Shale Gas”, *Asie.Visions*, n° 64, April 2013.

Executive Summary

This paper examines how China seeks to secure access to an ever-growing level of natural resources from overseas. In its quest for resources necessary to fuel its economy, does China seek to bolster the development of international markets, or rather to procure resources in a more mercantilist fashion?

China's varied behavior in a broad range of resource markets suggest that there is no guiding principle that pre-ordains a common approach today. Three cases – oil, iron ore and rare earths – show three different Chinese approaches to issues of resource procurement and allocation. In the case of oil, China has shown an increasing acceptance of market principles over the course of the last decade. In iron ore, meanwhile, China's strategy to gain a strong negotiating position within a pre-existing, closed system was ultimately upended by its inability to control its own market actors. The result was the opening-up of a more fluid market. Finally, the rare earth case provides an example of China's approach when it controls global production (albeit production within its own borders). China has been willing to contravene market principles in the rare earth trade either for diplomatic gains or to incite transfers of foreign technology to China. Nevertheless, it has also shown that it is not willing to sacrifice its participation in the broader system of international trade rules as laid out in the World Trade Organization (WTO).

Ultimately, while China's growing need for imported raw materials certainly poses a number of challenges, many of the concerns about China are exaggerated, or overlook emerging trends in the way Chinese companies do business overseas. In particular, fears of Chinese 'mercantilism' are tempered by the fact that Chinese companies have in practice served to reinforce and even improve, rather than contravene international market mechanisms for trade in resources. Skepticism of international market principles in China has seemingly waned over time, and Chinese leaders, strategists and companies seem increasingly convinced that markets play an important role in guaranteeing a level of resource security for the country.

Still, the complex relationship between China's state-owned enterprises (SOEs), government policy, and Communist Party leadership serve to blur the lines between corporate and national strategy. This will remain an area to follow as China's weight in global affairs expands and evolves.

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Introduction

China's rapid economic development in recent decades has placed it at the center of the global resource trade, but also at the heart of growing anxiety over what its emergence will mean for the rules that govern this trade. Since its policy of *zouchuqu*, or "going out" was first inaugurated over fifteen years ago in an effort to support Chinese companies going abroad, much has been discussed about the impact of the country's increased engagement on global norms and practices, particularly regarding access to oil, gas and minerals. It has become a widely-accepted view that the era of liberal market principles led by independent, international majors, which began in the wake of the resource crises of the 1970s, is now giving way to a system in which state-owned enterprises are playing a much greater role in the extractive industries, and where resource nationalism is becoming a much more prominent risk factor for foreign investors and international markets.¹ Ultimately, China plays a central role in this shifting landscape. The strategies and practices adopted by its government and companies, and the nature of links between politics and business, will inevitably be a determining factor in how energy and mineral resources are procured in the future, and ultimately the extent to which accessing these resources will become a source of major power rivalry and conflict in the decades to come.

The implications of China's growing demand for resources are vast and complex – reaching from geopolitics and the contours of a shifting global balance of power, down to the very fabric of social order within the communities, countries and regions where China and its entrepreneurs seek to procure natural resources. This broad scope is indeed too large to treat in an exhaustive manner here.² Rather, the aim of this paper is to look specifically at how China approaches the issue of resource allocation at the systemic level, if indeed a common Chinese approach can be identified. For instance, does China seek to reinforce market principles in the resource trade, or rather to secure access to resources in a more mercantilist fashion? Following an overview of China's overseas resource investment trends in recent

¹ Clingendael International Energy Program, "Current Trends and Strategies", *POLINARES Working Paper*, n° 43, April 2012, available at: <www.polinares.eu/docs/d3-1/polinares_wp3_part1.pdf>.

² For a recent analysis of the broad scope of implications, see E. Economy and M. Levi, *By All Means Necessary: How China's Resource Quest is Changing the World*, New York, NY, Oxford University Press, 2014.

decades, the paper will take a brief look at the country's approach to three different resource groups: crude oil, iron ore and rare earths. It will then discuss some key factors at play within China itself, namely how the perception of resource procurement through international markets has changed, and how the complex, intricate relationship between state, Party and private actors in the resource sector serves to blur the lines between a directed national strategy and private entrepreneurship.

Rising resource imports and China's overseas investments

As a result of its rapid industrialization and economic growth in recent decades, China's demand for energy and mineral resources has grown exponentially. Although it can in many respects be considered a resource-rich nation, China's capacity to supply its economy's own needs in oil, gas and a wide range of minerals has been outstripped by its burgeoning demand for these raw materials. China today accounts for over half of the world's consumption of iron ore, aluminum and nickel, and more than 40% of zinc and copper.³ Between 2002 and 2012, two thirds of the global increase in oil demand came from China. By 2013 the country had surpassed the United States to become the world's largest net importer of crude oil, bringing in an average of over 6.2 million barrels per day (bpd), or 58% of its total demand. These imports could rise to as much as 8 million bpd in 2020, as Chinese domestic production has stagnated and each incremental increase in demand must come from abroad. Furthermore, a turn towards natural gas as an alternative to coal is also likely to see Chinese demand for gas imports rise from just over 50 billion cubic meters (bcm) today to 150 or even 200 bcm in 2020.⁴

A relative newcomer

Naturally, China's investments in resource ventures overseas have also grown exponentially. Yet in historical terms, China is a relative newcomer to the global trade in commodities. The country only became a net importer of crude oil in 1993, and its first gas imports arrived in the form of LNG only in 2006 and by pipeline from Central Asia in 2009. Indeed, in the early stages of their internationalization, Chinese companies were handicapped by their late-comer status to resource markets and their own lack of experience in operating

³ I. Bremmer, "The China Decade", *Time Magazine*, 31 August 2015, p. 37.

⁴ Though alternative scenarios do exist, particularly given China's growth potential in domestically-produced shale and other unconventional gases, but also given a projected structural shift towards slower economic growth and industrial restructuring. See J. Seaman, "China's Growing Gas Insecurity and the Potential of Chinese Shale Gas", *Asie.Visions*, n° 64, Ifri, April 2013, available at <www.ifri.org/en/publications/enotes/asia-visions/chinas-growing-natural-gas-insecurity-and-potential-chinese-shale>.

overseas. Partly in an effort to improve the competitiveness of Chinese state-owned enterprises, and also to facilitate the country's access to foreign resources, China inaugurated a "Going out" policy in the early 2000s, providing higher levels of authorization for outward investments and accompanying Chinese companies in their overseas endeavors. Accessing oil resources was a key component of this policy, which was subsequently extended to mineral resources in 2004.

Still, by 2009 Chinese companies accounted for less than 1% of the total value of mine-stage mineral production outside of China, most of which took place in Asia-Pacific – Mongolia, Vietnam or Australia.⁵ Despite a dramatic rise in overseas investments, the position of Chinese mining companies outside of China remains far behind those of more established multinationals such as the Anglo-Australian giants BHP Billiton and Rio Tinto, or the Brazilian Vale.⁶ China's national oil companies, in particular CNPC, became heavily invested in first Kazakhstan, Venezuela and Sudan from 1996-97, but eventually branched out with investments of over \$20 billion across 30 countries in the period between 2002-2006.⁷ During this period, numerous political barriers also saw a number of high-profile overseas acquisition attempts rebuffed, including the attempt by China's CNOOC to acquire the American resource company Unocal in 2005 for \$18.5 billion, which ultimately failed after a searing debate in the US congress.

"Going out" goes into high gear

But in recent years there has been a remarkable rise in Chinese overseas investment in the resource sector, with a notable increase since 2008. Indeed, the global financial crisis provided an opportune moment for Chinese firms to increase their stake in overseas ventures, as they have enjoyed ever-increasing lines of credit from state banks – the China Development Bank and the China Export-Import Bank in particular – while traditional Western financiers have suffered from a severe credit crunch. Since 2008, pledges of Chinese investment have skyrocketed. According to statistics gathered by the

⁵ Chinese miners actually accounted for nearly 15% of the total value of mine-stage metal production (extraction) worldwide, but the majority of this production took place in China itself. M. Ericsson, "China's FDI in Mining: Threat or opportunity?", *Reuters*, 3 October 2011, available at: <www.reuters.com/article/2011/10/03/lmeweek-rmg-idAFL5E7KU2G320111003>.

⁶ D. Humphries, "Transatlantic Mining Corporations in the Age of Resource Nationalism", *Transatlantic Academy Paper Series*, 18 May 2012, available at: <www.transatlanticacademy.org/publications/transatlantic-mining-corporations-age-resource-nationalism>.

⁷ R. Dannreuther, "China's Foreign Investment in Natural Resources", *POLINARES Working Paper*, n° 62, December 2012.

China Global Investment Tracker,⁸ Chinese companies have committed to spend over \$550 billion in investment and construction projects related to overseas oil, gas, coal and metals. A wave of mergers and acquisitions has been a notable feature of China's spending spree. Among these deals have been Chinalco's acquisition of a 9% stake in Rio Tinto⁹ in 2008, the China Investment Corporation's acquisition of a 17.2% stake in the Canadian firm Teck Resources in 2009 and CNOOC's complete acquisition of the Canadian oil company Nexen for over \$15 billion in December 2012.

Surprisingly, these investments of recent years have also been widely dispersed across the globe. Latin America and East Asia have seen the highest concentrations of Chinese investor attention in metals, oil, gas and coal, with a cumulative total of over \$75 and \$72 billion respectively since 2005. By comparison, during the same period Africa saw Chinese investments in the same sectors total \$66 billion, with another \$63 billion being committed to the Middle East.¹⁰ China's interest in these regions comes as no surprise, but the high level of attention given to North America and Australia is noteworthy. Indeed, the United States and Canada together received pledges of over \$55 billion in Chinese investment in the metals, coal, oil and gas sectors, while Australia welcomed nearly \$60 billion. While part of these investments can be explained by the increasing availability of resources in these two regions, particularly following technological advancements that have allowed for the extraction of unconventional oil and gas resources from US shale and Canadian tar sands, for example, another explanation is that Chinese companies increasingly prefer the assurance of more stable investment climates, with relative political stability and a clear rule of law.¹¹

⁸ The China Global Investment Tracker is a database managed by the American Enterprise Institute that tracks commitments of Chinese foreign direct investment and construction contracts. It does not, however, provide an accurate reading of the final sums of money spent on an investment deal. In this sense, it provides a reading of how much money Chinese firms are willing to commit, but not necessarily how much they spend. The figures given here are based on the author's calculations of data found in this database. The database can be accessed at: <www.aei.org/china-global-investment-tracker/>.

⁹ Though opposition from Rio Tinto's other investors effectively blocked Chinalco from increasing its stake in 2009.

¹⁰ Author's calculations based on the China Global Investment Tracker, The American Enterprise Institute, 2015, <www.aei.org/china-global-investment-tracker/>.

¹¹ J. Jiang and C. Ding, *Update on Overseas Investments by China's National Oil Companies*, Paris, International Energy Agency, 2014.

China's "new normal", a teller of things to come?

While only a few years ago it seemed there was no end in sight to China's growth in resource demand, it now appears increasingly likely that the country's growth in demand for resources will enter into a longer-term stabilization phase. This will in many ways be the result of slower growth of the Chinese economy as a whole (targeted at around 7% growth in GDP annually, though many economists consider this figure to be highly optimistic), or what many have called China's "new normal".¹² In particular, attempts to emphasize growth in higher value-added industries and the service sector, while drawing focus away from more traditional heavy industries, will increase the resource efficiency of Chinese GDP. Moreover, growing pressure from Chinese citizens and civil society to respond to worsening environmental issues have pressured the Chinese government to adopt stricter air pollution standards, improve energy efficiency and set targets to cap carbon emissions by 2030, if not earlier. China's recent economic woes have also impacted resource demand in the immediate term, sending many resource exporting economies across the globe even further into a tail spin.¹³

While China's overall demand for energy resources such as oil, coal and a range of base metals such as iron ore or copper could certainly peak, if not fall, demand for other resources could stand to rise considerably, as Beijing's policy priorities cause a shift in industrial output. In the energy field, for instance, the necessity to reduce the burden of coal has been causing a growth in projected demand for the relatively cleaner-burning natural gas. Likewise, China is also on pace to have the largest base of civilian nuclear energy in the world, which will impact demand on related resources such as uranium. Rebalancing China's economy towards more innovative, energy-efficient, higher value-added products and new, high-tech strategic industries¹⁴ will also require significant growth in demand for a wide range of specialty resources such as rare earths, cobalt or lithium which are necessary inputs. As such, while Chinese

¹² M. Meidan, A. Sen and R. Campbell, "China: the 'new normal'", *Oxford Energy Comment*, Oxford Institute for Energy Studies, February 2015, available at: <www.oxfordenergy.org/wpcms/wp-content/uploads/2015/02/China-the-new-normal.pdf>, and K. Koyama, "China's 'new normal' and its energy demand", *Japanese Perspective on the International Energy Landscape*, Institute of Energy Economics, Japan, 20 February 2015, available at: <<http://eneken.ieej.or.jp/data/5958.pdf>>.

¹³ K. Johnson, "China's Meltdown Spells Even More Peril for Petro-States", *Foreign Policy*, 25 August 2015, accessible at: <http://foreignpolicy.com/2015/08/25/chinas-meltdown-spells-even-more-peril-for-petro-states-opec-russia-venezuela-iran/>.

¹⁴ China's "new strategic industries" include high-end equipment manufacturing, new energy industries and alternative energy vehicles. "China to boost strategic emerging industries", *China Daily*, 31 May 2012, accessible at: <www.chinadaily.com.cn/business/2012-05/31/content_15432514.htm>.

strategists certainly appear to be breathing easier regarding the projections of future demand for resources, demand stabilization is unlikely to happen across the board and questions regarding resource procurement and management will continue to be relevant.

Growing anxiety towards China

The scope of China's overseas resource investments, and particularly the speed with which Chinese companies have entered resource markets in recent decades, has been a source of apprehension for many foreign stakeholders and observers. One core element of concern, which will guide the analysis to follow, relates to whether or not China will fundamentally change the way in which resources are procured and traded. Indeed, many fear that despite the rhetoric of "win-win", China perceives the access to resources in zero-sum terms and that in its "hunt" for resources it is in essence "locking-up" global supplies, shutting out foreign competitors and creating a parallel industry with its own set of norms and practices.¹⁵ Such an approach would inevitably lead to greater competition for influence and even conflict over increasingly scarce resources and the security of supply routes. The close linkages between the Chinese state and enterprises are often identified as evidence of a clear national strategy for resource procurement, which mobilizes all of the diplomatic and financial means necessary to give Chinese companies a distinct advantage over their foreign competitors. Indeed, the financial backing of state banks certainly gives Chinese firms an advantage. From 2009-2013, for instance, the China Development Bank has lent an estimated \$106 billion in exchange for long-term oil and gas supply contracts to Chinese firms of 20 years or more.¹⁶ During the same period, Chinese firms have also increased their ownership of foreign equity oil – for which these companies own the right of sale and could repatriate in theory – from 1.1 million bpd in 2009 to over 2.1 million bpd in 2013 (or equivalent to the national production of Brazil). But to what extent have these activities actually cornered resources and stifled competition?

¹⁵ S. B. Cases and S. Earl, *The Hungry Dragon: How China's Quest for Resources is Shaping the World*, New York, NY, Routledge, 2013, p. 3-4.

¹⁶ J. Jiang and J. Stinton, *Overseas Investments by Chinese National Oil Companies: Assessing the drivers and impacts*, Paris, International Energy Agency, 2011; and J. Jiang and C. Ding, *op.cit.*

China as a market player?

The examples of oil, iron ore and rare earths

While China's dramatic entry into overseas resource markets does warrant close attention and scrutiny, many of the concerns have been over dramatized. Chief among them is the belief that China is locking up the world's resources and shutting out competition. On the contrary, studies have shown that China's overseas investments have served to multiply and diversify the sources of supply for energy and minerals that ultimately help to solve demand-side problems and benefit the broader community of global resource consumers. For instance, a 2010 study by Theodore H. Moran of the Peterson Institute of International Economics (PIIE) conducted a review of 16 major Chinese resource investments in overseas oil, gas and minerals and found that these investments ultimately served to expand, rather than constrain the global supply.¹⁷ Researchers from PIIE later conducted a detailed review of 34 natural resource investments in Latin America and came to the same conclusion – that Chinese investments generally serve to develop new sources of supply rather than take control over existing production.¹⁸

Beyond simply opening new supply sources, evidence also suggests that in practice Chinese firms have more often than not served to reinforce, and in some cases even improve the functioning of more open global resource markets, rather than resort to a closed producer-consumer system in which natural resources are shipped directly back to China for processing. Nevertheless, China's record is still far from clear cut. In some instances, as shown in the case of iron ore, the more closed-market strategies of Beijing or Chinese SOEs have only been scuttled by the inability of these two sets of actors to control competition from other Chinese competitors. In others, such

¹⁷ T. H. Moran, "China's Strategy to Secure Natural Resources: Risks, Dangers and Opportunities", *Policy Analyses in International Economics*, n° 92, Peterson Institute of International Economics, July 2010.

¹⁸ B. Kotchwar, T. H. Moran and J. Muir, "Chinese Investment in Latin American Resources: The Good, the Bad and the Ugly", *Working Paper Series*, Peterson Institute of International Economics, February 2012, available at: <www.piie.com/publications/wp/wp12-3.pdf> and T. H. Moran, "China's resource procurement: not just a zero sum game", *East Asia Forum*, 15 September 2012, available at: <www.eastasiaforum.org/2012/09/15/chinas-resource-procurement-not-just-a-zero-sum-game/>.

as rare earths, China's near-monopoly over the global production of resources has resulted in the manipulation of trade in order to respond to broader strategic, industrial goals – policies which have only been corrected when other strategic priorities, such as trade policy, are threatened. A deeper look at three examples – crude oil, iron ore and rare earths – will better illustrate the nuances in these different approaches.

Crude oil – conforming to the global market

Oil is a clear case in which a profit-driven, market logic has prevailed. Despite increased ownership of equity stakes by Chinese state-owned firms in overseas crude oil production, a large portion of this oil is in fact being sold on local or international markets.¹⁹ Those resources that do transit directly back to China are done so not based on strategic calculations but for clear economic reasons, such as geographic proximity or a high degree of compatibility with Chinese refineries.²⁰ Indeed, the observed behavior of Chinese oil companies abroad shows that commercial considerations, such as profitability and technology acquisition, rather than political motives are increasingly at the core of their overseas investment decisions.²¹

Even in the case of long-term supply contracts financed by the China Development Bank (CDB), which would suggest more direct, bi-lateral exchanges based on political considerations, there has been a bedrock of market logic and residual effects that have served to augment regional and global markets. Oil from Russia, for example, where the CDB has invested over \$25 billion in exchange for pipeline construction and the right of CNPC to buy 300,000 b/d for 20 years, is being sold at market rates, not preferential tariffs as some have suggested.²² Moreover, these deals have served to facilitate the development of under-served oil fields in Eastern Russia and construct an Eastern Siberia-Pacific Ocean (ESPO) pipeline network that ultimately serves the interests of consumers in East Asia and beyond. Venezuela is another case. Since 2007 the CDB has lent Venezuela an estimated \$42 billion in exchange for long-term supply contracts for Chinese companies. But while media outlets and even the Venezuelan government have often reported that China is gobbling up Venezuelan oil resources, in reality, while some of this oil is indeed shipped back to China, as much as 50-70% of it is actually

¹⁹ J. Jiang and J. Sinton, *op.cit.*

²⁰ J. Jiang and J. Sinton, *op.cit.*; E. Downs, *Who's Afraid of China's Oil Companies?*, Energy Security, Chapter Four, Washington, D.C., Brookings Institution Press, 2010, p. 88-89.

²¹ K. J. Tu, "Chinese Oil: an evolving strategy", *China Dialogue*, 24 April 2012, available at: <<http://carnegieendowment.org/2012/04/24/chinese-oil-evolving-strategy>>, and J. Jiang and J. Sinton, *op. cit.*

²² J. Jiang and J. Sinton, *op.cit.*

re-sold internationally, most likely in Latin America, and even to the United States.²³ Moreover, a study conducted by the International Energy Agency in 2011, and revisited in 2014 has found no evidence suggesting the existence of any directive on the part of the Chinese government to repatriate oil and gas resources.²⁴ In this sense, Chinese companies have expanded, not contracted the amount of oil available to foreign consumers on the international market and seem to be working more or less within the principles of the established trading system.

Iron ore – inadvertently transforming the market

Iron ore is a case where China has actually introduced more fluid market mechanisms for trade in raw materials, though rather inadvertently and perhaps even against the wishes of China's leadership and major companies. Contrary to oil, iron ore has for the last four decades either been produced by steel manufacturers that own their own mines, or has been traded within a largely closed system of fixed-term negotiations between the world's major iron ore suppliers – in particular BHP Billiton, Rio Tinto and Vale – and a handful of major companies from largely traditional importing countries – Japan, South Korea and Taiwan. Supply contracts have been negotiated on a fixed-term basis (roughly one year) and the spot market, where raw materials could be traded at fluctuating prices, has traditionally only made up a minute portion of overall trade. China's emergence as the world's largest steel producing country and its increasing turn towards foreign suppliers of iron ore have significantly changed the nature of this system in the last five years, though not in a way one might expect.

China's position is rather unique in that its iron ore consumers consist not only of large, state-owned companies such as Baosteel, but also of thousands of small, independent companies that together make up a significant portion of demand.²⁵ While China as a whole has become the world's largest importer of iron ore, the fragmentation of its steelmaking industry means that it has been exceedingly difficult to unify its negotiating position. Chinese authorities and the country's major steel manufacturers have indeed tried unsuccessfully to consolidate the industry in hopes of facilitating a stronger Chinese

²³ M. Ferchen, "China and Venezuela: Equity Oil and Political Risk", *China Brief*, vol. 13, n° 3, The Jamestown Foundation, 1 February 2013, available at: <[www.jamestown.org/single/?no_cache=1&tx_ttnews\[tt_news\]=40404&_ga=1.173405031.559827694.1404811778#.U7u6cEBkz0c](http://www.jamestown.org/single/?no_cache=1&tx_ttnews[tt_news]=40404&_ga=1.173405031.559827694.1404811778#.U7u6cEBkz0c)>

²⁴ J. Jiang and J. Sinton, *op.cit.* ; J. Jiang and C. Ding.

²⁵ This contrasts starkly with Japan, who has counted as many as 5 major steel manufacturers, and South Korea and Taiwan, with one each. E. Economy and M. Levi, *op.cit.*, p. 37.

position within the closed-door negotiation system that would secure a lower price for Chinese manufacturers. In the face of this failure, it has been the mass of China's smaller enterprises that have transformed the iron ore market. By circumventing the existing structure, these companies have entered the spot market in such numbers and with such a high volume of demand that by 2009 an estimated 60% of global trade in iron ore was being done on the spot market.²⁶ Since this time, short-term pricing contracts based on spot market indicators have become the new norm for iron ore trade. In essence, the emergence of Chinese demand has broken the closed system of trade in iron ore and facilitated a more fluid, short-term, open market of exchanges.

Surprisingly, this transformation of the global iron ore market has come in spite of attempts by China's leading industries and policymakers to continue a closed negotiation system, but one in which Chinese consumers would be in the driver's seat. One potential, longer-term consequence of this, however, may be that China's major steel manufacturers will seek to acquire their own iron ore mines and circumvent international markets altogether, just as Japanese and Western companies have done in the past.²⁷ Indeed, the China Iron and Steel Association, which brings together over 100 Chinese steel manufacturers, including major companies, has announced a goal for sourcing 40% of the country's iron ore imports from Chinese-invested mines overseas by 2015.²⁸

Rare Earths – when China controls production

The examples of oil and iron ore illustrate cases in which China has had to procure significant amounts of strategic resources from overseas. But it is also instructive to examine Beijing's behavior in cases where China has a clear resource advantage. Rare earth elements are one of the few examples of a resource group in which China has a clearly dominant role in production and trade. While rare earth production is nowhere near the scale of the two previous examples, their increasingly strategic character makes them an important subject of analysis.²⁹ Indeed, with the advancement of technology, so-called "technology metals" such as lanthanum, neodymium or dysprosium are becoming increasingly indispensable resources in the fabrication of anything from wind turbines to computer hard drives to precision-guided munitions.

²⁶ E. Economy and M. Levi, *op.cit.*, p. 39.

²⁷ E. Economy and M. Levi, *op.cit.*, p. 39, and D. Humphries, *op.cit.*

²⁸ D. Humphries, *op.cit.*, p.16-17.

²⁹ For a more in-depth analysis, see: J. Seaman, "Rare Earths and Clean Energy: Analyzing China's Upper Hand", *Note de l'Ifri*, September 2010, accessible at: <www.ifri.org/en/publications/enotes/notes-de-lifri/rare-earths-and-clean-energy-analyzing-chinas-upper-hand>.

Identifying early on the strategic character of these resources and the wealth of the deposits present in Chinese soil, China began to devote efforts into the research and development of rare earth-related applications and to ramp up production in the 1980s. Overtaking the United States to become the world's largest rare earth producer in 1985, China has produced anywhere from 90-100% of the world's supply of most of these 17 elements for the last two decades.³⁰ Chinese companies would even make a number of offers to acquire or gain majority shares in overseas mines, particularly in the United States and Australia.³¹

Some have argued that China adopted a deliberate strategy to flood the market with cheap supplies in an effort to deflate prices, push competitors out of production and ultimately dominate global production. While this is effectively what happened, the deliberate nature of China's strategy from the outset can be called into question. While large SOEs such as Baosteel are present in the sector, the bulk of the country's production over the years – particularly in regions of the southwest and southeast, where the more scarce and arguably strategic 'heavy' rare earths are mined and produced – has been done by private small and medium enterprises, which are hardly under the control of Beijing. While Chinese leaders certainly recognized the potential of these resources, if the cornering of the global market was indeed their goal, it is likely that they would have taken to organizing national production in much the same way as resources such as oil was done – through a handful of large, state-owned enterprises that could theoretically be held accountable to national interests and broader strategic goals.³² That this organization of rare earth producers did not take place leads one to question whether China's leadership in the 1980's through the 1990's actually intended to dominate global production, or simply to take advantage of the resources they had at home to fuel their own downstream industries.

Regardless of this debate, what is clear is that from 2010 China began to adopt strict export restriction policies that would severely disrupt global markets. From July 2010, Chinese authorities announced an export quota that would effectively restrict rare earth exports to levels well below expected rest-of-world demand. In a diplomatic row over actions taken around disputed islands in the East China Sea, exports of rare earth elements to Japan, the world's largest importer of rare earths, were also effectively blocked for more

³⁰ See: *Mineral Commodity Summaries: Rare earths*, United States Geological Survey (USGS), various years, available at: http://minerals.usgs.gov/minerals/pubs/commodity/rare_earths/.

³¹ C. Hurst, "China's Rare Earth Elements Industry: What Can the West Learn?", Institute for the Analysis of Global Security (IAGS), March 2010, p. 13-14, accessible at: www.iags.org/rareearth0310hurst.pdf.

³² Though, as discussed further below, the degree to which SOEs are held accountable to national interests and state strategy is debatable.

than two months in late 2010. By mid-2011 prices had skyrocketed (in some instances more than 15 times 2009 levels) and global consumers were in a frenzy. Moreover, prices of rare earths outside of China would regularly exceed those found in China's domestic market by anywhere from 50 to 500%.³³ It should also be noted that during this time, a black market for rare earth exports from China bloomed to help fill the gap left by China's formal export restrictions. In 2011, China's black market exporters would add an additional 20% to the country's officially exported rare earths.³⁴ Despite Beijing's efforts to crack down on this market, its lack of real control over rare earth producers in China is certainly noteworthy.

Ultimately, many foreign industries and governments have accused China of restricting exports and artificially inflating export prices in an effort not only to protect domestic industries but incite foreign companies to relocate production of key industrial processes to China in return for the guarantee of lower prices and a stable supply of resources. A formal complaint was eventually brought before the World Trade Organization (WTO)'s Dispute Settlement Board (DSB) by the United States, the European Union and Japan in 2012. The DSB would eventually rule in August 2014 that China had been found in violation trade rules it had agreed to when it joined the WTO in 2001. Rather than face retribution, China formally abandoned its export quota system in 2015.³⁵

Three observations can be drawn from this saga for the purposes of this paper. First is that, once China had obtained a clear advantage in the global production of rare earths, it showed a willingness to use this advantage to both pursue broader goals of developing its high tech industries, and to further diplomatic goals in its relations with Japan. Secondly, Beijing's efforts to apply strict export rules on the industry were hampered by its lack of control of industrial actors themselves, which sought to take advantage of inflated prices overseas. Finally, Beijing ultimately opted to respect the terms of its engagement with the WTO, despite its disagreement with the DSB's final rulings, in order to uphold principled trade relations with partners such as the United States, Europe and Japan.

³³ M.H. Ting and J. Seaman, "Rare Earths: Future elements of conflict in Asia?", *Asian Studies Review*, Vol. 37, n° 2, 2013, p. 237-238.

³⁴ G. Hatch, "Chinese Rare Earth Statistics Lost in Translation?", *Technology Metals Research*, 10 December 2012, accessible at: www.techmetalsresearch.com/2012/12/chinese-rare-earth-statistics-lost-in-translation/.

³⁵ For a detailed, updated account of China's actions, the case brought against it in the WTO, and the final rulings, see: *China – Measures Related to the Exportation of Rare Earths, Tungsten and Molybdenum*, World Trade Organization, Dispute Settlement: Dispute DS341, accessible at: www.wto.org/english/tratop_e/dispu_e/cases_e/ds431_e.htm, accessed 10 September 2015.

Market principles and state actors: A complex interaction

The above examples of oil, iron ore and rare earths show a complex, even contradictory set of behavior on the part of China. Indeed, in some cases, China has come to embrace market principles, while in others resources have been used to further broader economic and strategic goals to a certain extent. Following this discussion, it is instructive to explore how the perceptions of resource markets have evolved towards an increasing degree of acceptance within China's energy security debate over the years, particularly in the case of oil, and how the confused relationship between the state, the Party and economic actors continues to obscure a broader conclusion about what this might mean for China's future reliance on resource markets.

The role of markets and international cooperation in China's evolving energy security debate

To be sure, in China the role of the market in ensuring overseas supplies of resources has been a hard sell, and is not necessarily accepted by everyone. This is particularly the case in the field of energy resources. During the 1990s and even early 2000s, as China's increasing reliance on foreign resources became apparent, concerns over how to guarantee a security of supply were a central topic of debate in the country, particularly for oil. Many Chinese strategists and commentators have indeed been suspicious of international markets and the willingness of Western powers, and the United States in particular to allow China to access strategic natural resources, even if they have the money to pay for them.³⁶ The US-led invasion of Iraq in 2003 served to reinforce these fears that China's oil security was ultimately beholden to the United States and its interventionist tendencies.³⁷ In 2004, for instance, the vice president of the Chinese Communist Party's Central Party School made the

³⁶ E. Downs, "China", *The Brookings Foreign Policy Studies Energy Security Series*, December 2006, available at: <www.brookings.edu/~media/research/files/reports/2006/12/china/12china.pdf>.

³⁷ M. Meidan, "The Implications of China's Energy-Import Boom", *Survival*, vol. 56, n° 3, June-July 2014, p. 179-200.

claim that the competition for resources posed a greater challenge to China's "peaceful rise" than the Taiwan issue.³⁸ In the early days of the "Going out" policy, Chinese companies lobbied for government support based on the logic that their investments in overseas equity would increase the country's resource holdings and therefore its energy security. In a crisis, Chinese companies would be able to repatriate their overseas resources in the service of the nation. But as these companies have internationalized, their familiarity with the workings of international markets has generated a greater acceptance of market principles. Indeed, Chinese companies, constrained by regulated prices and limited profits at home, have enjoyed windfall profits from the development and overseas sale of resources. The more they invest in resource markets abroad, the more Chinese interests become vested in the functioning of these markets.

Indeed, international markets have over time become an integral component of China's evolving energy security system. China's first White Paper on Energy, published by the State Council in 2007, states that "China will actively expand international energy trade, promote the complementary advantages of the international energy market and maintain the stability of this market."³⁹ This assertion by the country's highest authoritative body reflects a broader shift in the Chinese energy security debate, following the realization in the early 2000s that the greatest threat to the country's energy system is in fact internal, not external.⁴⁰ Indeed, from 2002-2005 China suffered its most significant energy crisis in recent decades, when severe electricity shortages resulting from poor economic planning in the late 1990s caused rolling black-outs in three-quarters of China's provinces. Ultimately, oil and coal resources purchased on the international market played an important role in mitigating the effects of this crisis, which in turn challenged the accepted view in China that domestic energy was more secure than foreign supplies.⁴¹ From this period onward, a greater emphasis in China's debate on energy security, and resource security more broadly has been placed on industry management and domestic challenges. Geopolitics is but one, relatively limited component.⁴²

³⁸ P. Andrews-Speed and R. Dannreuther, *China, Oil and Global Politics*, New York, NY, Routledge, 2011, p. 97.

³⁹ "China's Energy Conditions and Policies", *White Paper on Energy*, State Council of the People's Republic of China, 2007, available at: <www.china.org.cn/english/environment/236955.htm>.

⁴⁰ M. Meidan, "The Implications of China's Energy-Import Boom", *op.cit*.

⁴¹ M. Meidan, "The Implications of China's Energy-Import Boom", *op.cit*; Echoing this trend, Pierre Noël also argues that China's experience is no exception: nearly all of the major disruptions in energy supply in recent history have been the result of domestic, rather than foreign supply problems. P. Noël, "Asia's Energy Supply and Maritime Security", *Survival*, vol. 56, n° 3, June-July 2014, p. 201-216.

⁴² M. Meidan, "The Implications of China's Energy-Import Boom", *op.cit*.

Today, it has become increasingly common in China to find analysts who argue that the vulnerabilities brought on by a dependency on foreign resources are rather a common problem among resource-consuming countries, which is ultimately a source of interdependence that can generate forums for cooperation.⁴³ By supporting fluid markets, China can in essence reduce the supply risks associated with any given investment or region. Moreover, when operating overseas Chinese companies face many similar challenges to other resource majors – including local security risks and rising resource nationalism. Indeed, in countries such as Kazakhstan and Venezuela, where China's hands-off diplomacy is supposed to render its companies more immune to local pressures to nationalize foreign investment projects, Chinese assets have been nationalized alongside those of Western companies.⁴⁴ More than simply taking advantage of foreign technology and expertise, therefore, Chinese firms have increasingly partnered with foreign companies in third markets in an effort to diversify risk. Chinese investments in Iraq are a prime example. Less than a decade after the US-led invasion, CNPC has been and remains at the forefront of investments into Iraqi oilfields, but has chosen to partner with foreign firms such as Total, Petronas and BP.

The complex relationship between the Chinese state and enterprises

Beyond its increasing integration into global markets, much of the concern about China's growing presence in overseas resource ventures stems from the rather opaque relationship between the state, the Party and the companies themselves. Indeed, Chinese companies are often seen as agents of the state, enacting policy directives that emanate directly from Beijing. In this sense they are often interpreted as political actors that can be mobilized in the service of the state's strategic priorities. But here as well, the reality is more complex.

It should be stressed that while in the energy industry, and particularly in oil and gas, state-owned firms are dominant and lead the way in foreign ventures, the world of mining is much more diverse. Indeed, it is estimated that nearly two-thirds of Chinese companies that engage in mining projects overseas are in fact private companies (though more opaque links between the leaders of these

⁴³ See for instance the contributions to "China's Defining Challenge: Energy", *China Security*, vol. 2, n° 2, summer 2006.

⁴⁴ M. Ferchen, "China's Misguided Hugo Chavez Love Affair", *The Diplomat*, 30 November 2012, and R. Dannreuther, "China's Foreign Investment in Natural Resources", *POLINARES Working Paper*, n° 62, December 2012.

companies and the Party are difficult to discern).⁴⁵ Neither of the two largest state-owned mining firms in China's domestic market – China Minmetals or Chinalco – is in fact dominant overseas. The role that these private companies can play in creating market conditions that are beyond the will of Beijing and China's larger economic interests is clearly illustrated in the case of iron ore markets discussed previously.

Nevertheless, it is undeniable that state-owned enterprises play a significant role in China's economy. For those industries that are dominated by state-owned actors, a cursory examination of the management structure often suggests a unitary decision-making process. Under the surface, however, is a complex web of decentralized control and competing influences that lends itself to rivalry and division.

Chinese state-owned resource companies do indeed have close, even direct relationships to the central government, local or provincial administrations. As such, they also enjoy a number of advantages over their foreign, independent counterparts. These include the clear diplomatic support of the Chinese government and significant sources of public financing that can come in the form of direct credits for overseas investments, or public aid directed towards host country development, such as local infrastructure projects. Beyond these advantages are levers that can impact a company's freedom of movement or profitability. For SOEs as for private companies the state can authorize or block the approval of overseas investments using various state agencies. Furthermore, domestic prices for various strategic commodities, including oil and gas, are still largely set by government agencies such as the National Development and Reform Commission (NDRC), and have a direct impact on a company's profitability. Moreover, the leaders of China's SOEs themselves are often closely tied to government and Party structures. This is particularly the case in strategic sectors such as oil and gas, and among China's three national oil companies (CNPC, Sinopec and CNOOC). The heads of each of these companies traditionally hold Vice Ministerial rank within the government and are senior members of the Chinese Communist Party (CCP). In recent years, leadership restructuring among these three companies has served as a clear reminder of the level of control the CCP wishes to maintain over their activities.⁴⁶ This system of appointments means that the career paths of SOE managers are linked not only to the performance of their companies, but also to their ability to respond to political imperatives.

⁴⁵ E. Economy and M. Levine, *op.cit.*, p. 60.

⁴⁶ E. Downs and M. Meidan, "Business and Politics in China: The Oil Executive Reshuffle of 2011", *China Security*, Issue 19, World Security Institute, 2011, p. 3-21.

Despite the many levers the government and Party can use to coordinate national strategic objectives and the activities of the individual state-owned companies, it would be incorrect to say that state ownership translates into government, or even Party control over the activities of Chinese SOEs. Over time, Chinese mining and oil SOEs have gained strong political influence, highly qualified personnel and significant financial resources of their own. Indeed, many SOEs have in fact become more powerful than the ministries or public organizations that are tasked with overseeing them, and in some cases can have a strong influence on policy decisions.⁴⁷ For instance, management of China's energy sector has notoriously lacked a powerful energy ministry capable of formulating policy and coordinating the activities of energy companies. But one principle reason that this ministerial structure has never emerged is that oil companies have frustrated the process in an effort to maintain their own degree of influence and access, as well as independence.⁴⁸ Beyond the SOEs themselves, the degree of relative independence of financial institutions such as the China Development Bank is also a subject of discussion.⁴⁹

Ultimately, what is clear is that when the strategic interests of the state and the commercial interests of individual companies coincide, there is seemingly effective coordination between state agencies and Chinese SOEs. Where the degree of coordination is less certain is when these interests are not seen as overlapping. Nevertheless, China's oil and mining companies would be hard pressed to resist a direct government intervention, but are rarely called upon to do so, as this intervention typically comes in the form of general policy directives, not managerial decisions.⁵⁰

⁴⁷ J. Jiang and J. Sinton, *op.cit.*

⁴⁸ P. Andrews-Speed, *The Governance of Energy in China: Transition to a Low-Carbon Economy*, London, Palgrave Macmillan, 2012.

⁴⁹ E. Downs, "Inside China, Inc.: China Development Bank's Cross-border Energy Deals", *John L. Thornton China Center Monograph Series*, n° 3, March 2011, available at:

www.brookings.edu/~media/research/files/papers/2011/3/21%20china%20energy%20downs/0321_china_energy_downs.pdf.

⁵⁰ P. Andrews-Speed, *op.cit.*, 2012.

Conclusion

The scope and pace of China's emergence have no doubt had a significant impact on natural resource markets over the last decade or more, but concerns about whether China will necessarily create transformative new rules for how natural resources are procured and exchanged should be tempered. Indeed, Chinese companies have increasingly integrated into global commodity markets and many Chinese strategists and policymakers seem to have become much more accepting of the idea of bolstering resource security through market principles. Whether this is a temporary trend or the beginning of a long-term era is certainly open for debate, but as Economy and Levi (2014) point out, while China has certainly made a significant impact on the global resource trade, it is also important to understand that its growing number of dealings with the world at large have also served to change China.⁵¹

This paper has only scratched the surface of this broad topic. Indeed, China's resource quest has had and will continue to have vast and considerable implications for the world at large. At the global level, it will additionally be important to consider how resource security fits into China's international strategy and its role in shaping the broader transformation of the international order currently under way. Planetary issues such as climate change or biodiversity will also be fundamentally affected by how China procures and uses natural resources. At the local level, China's investment and business practices will continue to affect local communities and environments, and impact the degree to which emerging, progressive norms in areas such as responsible governance and corporate social responsibility develop and take hold. And the list goes on. For better or for worse, China's participation in the global resource trade will continue to have profound implications at all levels, while its inclusion and active participation in both dialogue and action on these critical issues is crucial to ensuring positive future outcomes.

⁵¹ E. Economy and M. Levi, *By All Means Necessary: How China's Resource Quest is Changing the World*, New York, NY, Oxford University Press, 2014.