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China's Quest for Energy Security: Redefining and Driving Foreign Aid

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Abstract

China's pace of development and rapid depletion of its own natural resources are driving forces in its international diplomatic relations. China's hunger for energy resources, particularly fossil fuels, is prevailing internationally. With its demand expected to expand significantly, China is positioning itself to compete aggressively and diplomatically for energy security.

China is employing its human and monetary resources in the form of foreign aid to developing regions with the implicit objective of advancing its energy security interests. This report explores China's growing infrastructure aid to countries in Central Asia, also known as China's periphery, and Africa as a means of procuring energy resources. We also discuss the inner workings of China's foreign aid policy, its challenges and benefits, and how diplomatic relations and resource exchanges have shaped China's image and upheld its growing demand for natural resources, particularly fossil fuels.

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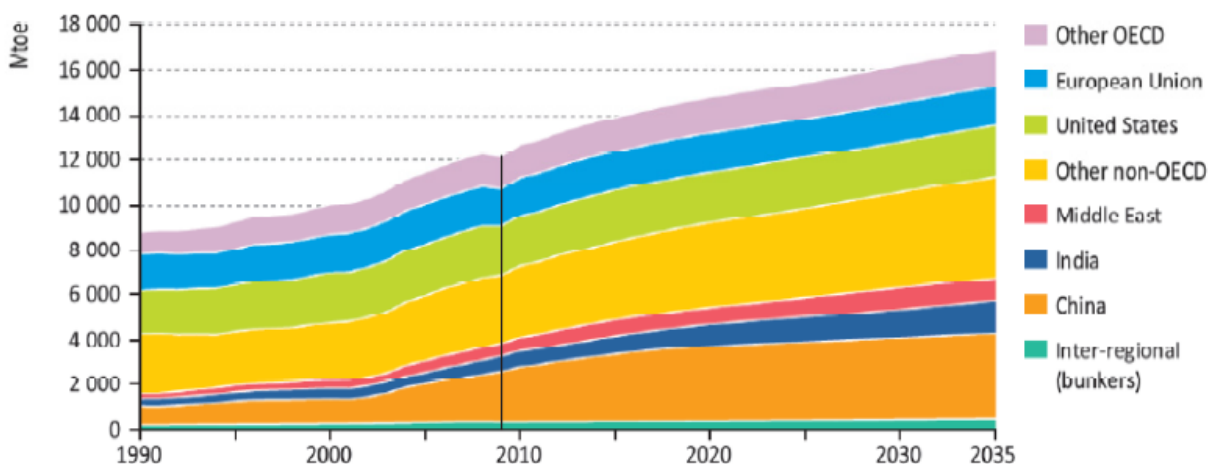
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Introduction

China's pace of development and rapid depletion of its own natural resources have been driving forces in its international diplomatic relations. Accounting for the largest population in the world and with 5.26 percent GDP growth in 2011, (Economy Watch). China's hunger for energy resources, particularly fossil fuels, is prevailing in the international market as it demands 17 percent of the world's global consumption. With its demand expected to expand 75 percent by 2035 (Figure 1), China is positioning itself to compete aggressively and diplomatically for energy security (Kraus 2010).

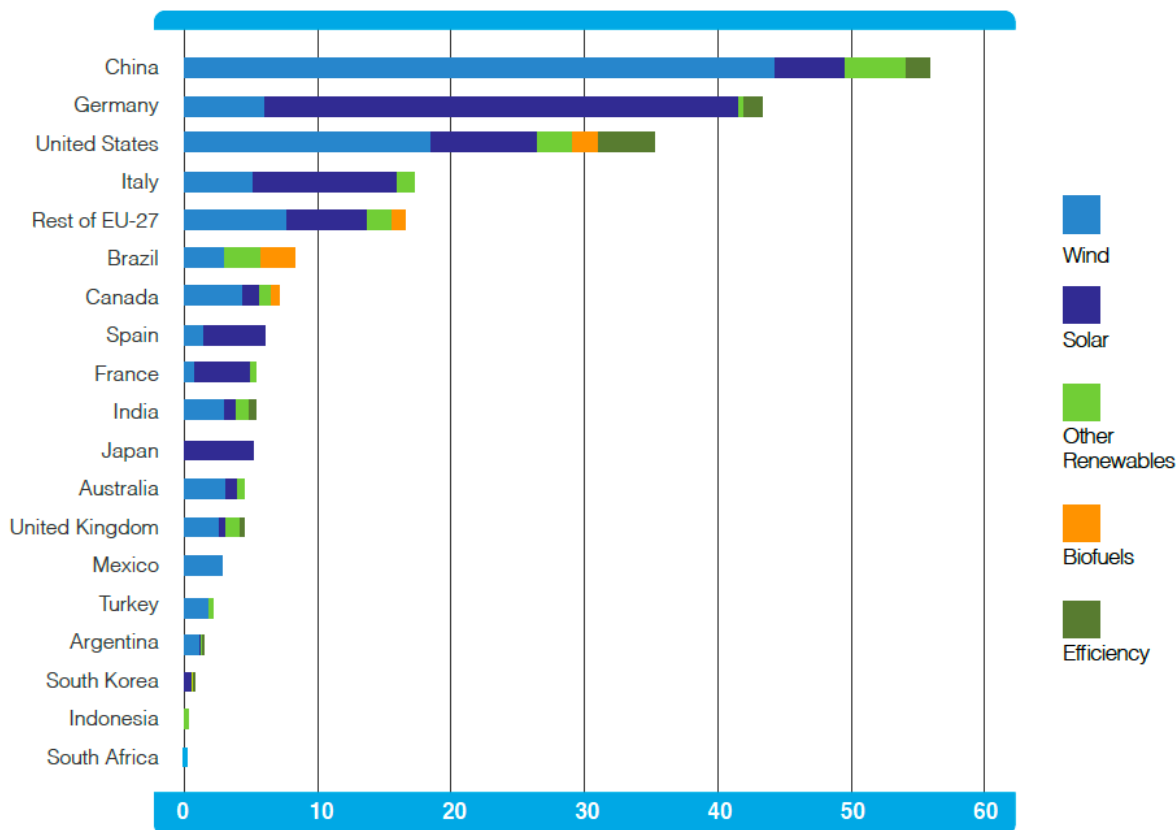
Figure 1: Primary energy demand until 2035



SOURCE: IEA, World Energy Outlook, *New Policies Scenario*

Although China is facing increasing domestic needs for fossil fuels, coal is the only abundant fossil fuel resource in the country. China's current recoverable domestic reserves represent 19 percent of the world's coal reserves—behind the United States' 23 percent, but more than Russia's 16 percent. In 2009, China consumed more coal than the next sixteen biggest consumers combined, and coal supplied nearly 67.1 percent of China's total primary energy supply in 2010 (Best and Levina 2012). Coal is expected to remain the dominant fuel source in the next several decades, driven largely by demand in the power sector as China continues to grow and prioritize developing a domestic energy source. China's energy security concerns have also accelerated coal power plant expansion, with large investments in more efficient and more centralized new-generation coal power plants.

In addition to its investments in domestic coal resources, China is enhancing its energy security by allocating significant funding toward alternative energy. In 2005, China attracted less than \$3 billion worth of private investments in alternative sources such as wind, solar, and biofuels. By 2010, however, China had become the leader in the clean energy sector, investing more than \$54 billion (Figure 2). China now accounts for almost 50 percent of all manufacturing of solar modules and wind turbines in the world (The Pew Charitable Trusts 2010).

Figure 2: Clean energy investment by country and sector, 2010 (Billions of \$)

SOURCE: The Pew Charitable Trusts, *Who's Winning the Clean Energy Race*

Through these investments in domestic coal and alternative energy production, China is attempting to address rising energy demand while enhancing the country's energy security. However, additional energy resources are necessary for China to sustain its economic growth.

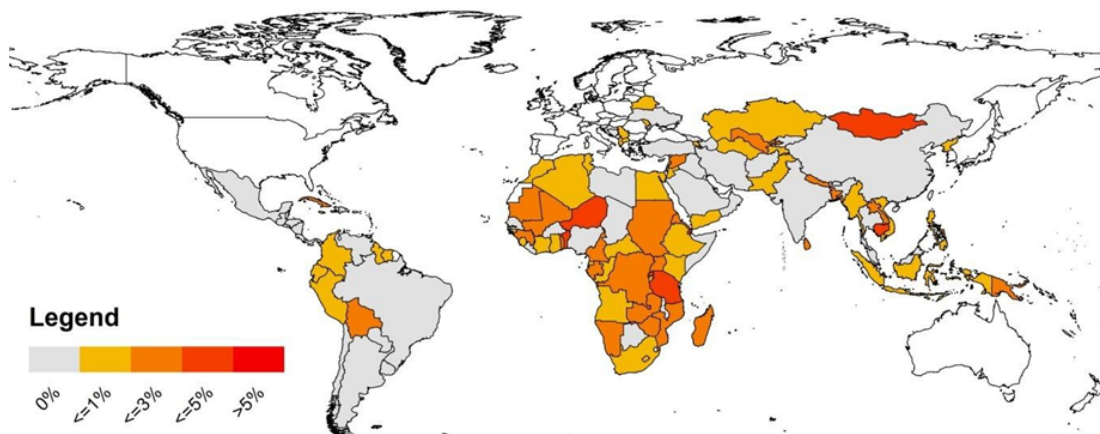
Given the terrain and layout of the land, China is at a disadvantage in terms of geographic access to natural resources. Most of China's oil is located in the northeast regions, where it is largely inaccessible. In the east, where much of the country's population is concentrated, oil fields have surpassed their highest point of production (Lieberthal 2003, 279). China is the world's fifth-largest oil producer, producing 4.07 million barrels per day (bpd), while it is the third largest consumer, consuming 9.4 bpd (Central Intelligence Agency). The quest for oil has turned China's attention outward to oil producers and regions that can fulfill China's need where internal supplies are insufficient.

The close of 2011 saw oil prices at \$100 per barrel, a 19.6 percent increase from

the beginning of the year. Overall international demand grew 1.04 percent, with emerging economies, primarily China, as a guiding force. The 2012 projections place China at an expected 0.04 million bpd increase, which contributes 40 percent of the total growth in demand that year. This, together with China's inflation rate and austerity measures in the Eurozone, is putting pressure on policy makers to dedicate further attention to China's shift in energy security policies (Arab News 2012).

In 2011, China published its first ever foreign aid policy (Provost 2011). The report reveals that Africa and Asia were the main beneficiaries of this aid in 2009, receiving 45.7 percent and 32.8 percent of China's aggregate foreign aid, respectively. While Beijing denies that foreign aid provided to Asian and African nations is motivated by its energy security interests, the forms of aid and trade-offs it employs suggest otherwise (Xinhua 2011).

Figure 3: Number of aid projects completed (Percent of China's total aid, 1996-2005)



SOURCE: "Rogue Aid? The Determinants of China's Aid Allocation." International Political Economy Society. Princeton University 2011

China's foreign aid takes three main forms: grants, interest-free loans, and concessional loans (Xinhua 2011). The country uses a unique mechanism to ensure that its concessional loans advance its energy security interests: The government's Export-Import (EXIM) Bank and China Development Bank grant a recipient country a concessional loan securitized by a natural resource, which the recipient country uses to pay China to carry out large infrastructure projects. China also gives grants for hospitals, schools, and human capital development, and interest-free loans for small to medium-sized projects.

China is employing its human and monetary resources in the form of foreign aid to developing regions with the implicit objective of advancing its energy security interests. This policy analysis will explore China's growing infrastructure aid to countries in Central Asia, also known as China's periphery, and Africa as a means of procuring energy resources. This analysis will also discuss the inner workings of China's foreign aid policy, its challenges and benefits, and how diplomatic relations and resource

exchanges have shaped China's image and upheld its growing demand for natural resources, particularly fossil fuels.

China's approach to foreign aid

China defines aid differently than the Organization for Economic Cooperation and Development (OECD). In 1960 the OECD defined official development assistance (ODA) as resource transfers from one government to another or from a government to an international body like the United Nations that are "administered with the promotion of the economic development and welfare of developing countries as its main objective." As a non-OECD member, China defines its aid through the "Eight Principles." Following a series of visits to the African, Asian, and Latin American nations in the early 1960's, Premier Zhou Enlai proposed these Eight Principles governing China's foreign aid. These principles outline China's foreign aid endeavors as a means of progressing mutually beneficial relationships between itself and other "poor" nations, respectful of sovereignty and independence, utilizing low and no interest loans (Ministry of Foreign Affairs, PRC).

While the Eight Principles definition largely aligns with the OECD ODA definition to contribute to "economic development and welfare of developing countries," China disburses aid for political reasons as well. China considers charitable donations from private citizens, not the government, and export credits forms of aid. (Lengauer 2011). It also does not necessarily offer at least 25% of ODA as a grant in accordance with the OECD standard (OECD).

According to a Chinese white paper on its foreign aid policy published in 2011, the Ministry of Finance and China's Information Office offer the following boundaries for aid classification (Xinhua 2011):

- Grants: hospital, school, and low-cost housing construction projects; water supply projects; "other medium and small projects for social welfare;" human resources development cooperation; technical cooperation; and assistance-in-kind and emergency aid.
- Interest-free Loans: public facilities; "projects to improve people's livelihoods;" focused on developing countries with good economic conditions.
- Preferred or Concessional Loans: large- and medium-sized infrastructure projects with "economic and social benefits."

Given that access to concrete data of China's foreign aid policy is limited, the international community's demand for more tangible information is rising. To date, the most reliable information comes from witnessing the results of projects launched by Beijing in regions like Africa and Asia, who currently receive the vast majority of China's redefined aid.

China's involvement in Central Asia

Historical context

Beijing's interest in opening trade routes westward, a relatively weak ability to guarantee control of the seas between the Middle East and China's eastern coast, continuing unrest and instability in Xinjiang, and an abundance of energy sources in Central Asia forced Beijing to court the Central Asian republics immediately following the breakup of the Soviet Union. During the last two decades, relationships with Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, and Turkmenistan have evolved as potential means to guarantee China's near- and medium-term energy requirements, especially in western China. Establishing favorable relations with these energy-rich states would provide China with a direct means of delivering resources into its territory, reducing the risks and costs associated with shipping, developing alternative energy sources, and alternative means of accessing energy.

Beijing was quick to recognize and establish formal relationships with the Central Asian states after the breakup of the Soviet Union in 1990. Many experts argue that China's intentions at the time were security-focused: it sought to counterbalance unrest along the troubled western border with the Uyghurs in Xinjiang province, a protracted domestic security challenge for Beijing (Wong 2008). As Chinese energy demands grew, however, Beijing began to look increasingly to the newly-formed republics to augment China's energy needs. Another set of drivers for Beijing's swift engagement with the new republics was to ensure a peaceful transition from Russian rule along China's border, initiate a diplomatic dialogue on the border disputes in the region, and counter Uyghur engagement with groups sympathetic to its cause. These drivers precipitated the creation of the Shanghai Cooperation Organization (SCO). A security and development-focused international organization comprising China, Russia, and all but one of the Central Asian states (Turkmenistan), SCO is said to be a Far Eastern counterbalance to NATO (SCO 2012).

Strategic value of Central Asia

The Central Asian republics provide Beijing with both an important energy source and potential strategic overland hub to facilitate intercontinental transportation and trade to complement sea lanes. China may be concerned about a scenario where relations with Washington deteriorate, and the United States blocks vital shipping lanes to China because such a move would limit Beijing's oil and gas imports, which could in turn cripple parts of the Chinese economy. The Central Asian republics provide an opportunity for Beijing to diversify its energy sources and transportation portfolio via pipelines, roads, and rail, thereby mitigating the consequences of a standoff with the United States. The Central Asian republics also offer Beijing a strategic buffer from the instability and regional security challenges present in southwest Asia, specifically Afghanistan. Shared ethnicities, cultures, and traditions with western China likely contribute to the strategic value Beijing sees in the republics.

Lastly, the concentrations of oil, gas, and energy reserves present in the five republics are among the highest in the world. The Central Asian states, especially Kazakhstan, share a strategic geographical location that enables control over a large percentage of the world's oil and natural gas supply (Alexander's Gas and Oil Connections 2006). According to the Chinese press, Astana signed a contract with Beijing worth "several billion dollars" for long-term supply of uranium to China, which could help sustain peaceful usage of nuclear energy while also supporting nuclear weapons stewardship programs (Shanghai Daily 2011).

Risks and challenges

Despite the significant strategic, geopolitical, and economic benefits the region affords Beijing, investment in Central Asia does not come without significant risk. Although the region provides a buffer from the southwest Asian sources of conflict and instability, peace in that region is far from a near-term reality. Unrest in Afghanistan or Pakistan could reverberate across borders into Tajikistan, Kyrgyzstan, Uzbekistan, or other countries given ethnic ties between the southwestern and Central Asian states. Central Asia attracts significant attention because of its strategic location—the world's major power brokers view the region as highly desirable and invest heavily in it, consequently raising barriers for entry. Furthermore, despite being on China's periphery, getting "product" to China's eastern coast, where the vast majority of its population resides, is a major challenge and may likely be cost-prohibitive.

Sino infrastructure aid to Central Asia

China's foreign aid support to Central Asia ostensibly began with formal recognition of the republics. While it is unclear how or if Beijing may have supported the Kazakhs, Tajiks, Turkmen, Kyrgyz, and Uzbek people under Soviet rule, following this brutal experience, the newly formed Central Asian governments in 1991 likely welcomed a counterbalance to Moscow. Beijing accepted this role. Driven by Premier Zhou's principles of aid to developing countries, much of Beijing's support has focused on enabling and empowering the newly-formed states while opening trade and energy corridors from China into the region, the Middle East, and Europe. As a result, much of Beijing's aid in the region has been focused on developing the Central Asian infrastructure to facilitate development of transportation corridors (Xinhua 2011).

All of the Central Asian republics receive various levels of infrastructure development aid from China with the lion's share of funding provided through one of three mechanisms: grants, interest-free loans, and preferred or concessional loans. Several large infrastructure projects in the region—including a power grid expansion, Astana-Almaty high speed rail, and the Atyrau Oil Refinery projects in Kazakhstan; the Dushanbe-Chenak highway reconstruction project in Tajikistan; and the Central Asian-China gas pipeline—are funded through preferred loans from the EXIM Bank (Shanghai Daily 2011).

- China used EXIM to finance a high-speed rail project between Astana and Almaty in a deal valued at “billions of dollars”, according to the Chinese press. The two countries agreed to the deal in 2011 and the rail line is expected to be completed in 2015 (Shanghai Daily 2011).
- One of the larger joint projects currently underway between China and three of the Central Asian states is construction of a natural gas pipeline that will originate in Turkmenistan, transit Uzbekistan to Kazakhstan, and terminate in Xinjiang. The estimated value of the deal is \$7.3 billion, with EXIM Bank financing up to 60 percent (The China Post 2007).
- Another aid strategy Beijing has employed is its loan-for-oil initiatives aimed at securing oil reserves when world oil prices are trading unusually low. For example, in April 2009, as global oil prices fell to around 40 percent of 2008 levels, the Wall Street Journal reported that the China National Petroleum Corporation (CNP) and Kazakhstan’s national energy company jointly purchased an Indonesian-owned oil and gas producer. CNP lent capital to the Kazakhs to finance the deal. EXIM provided \$5 billion to the Kazakhstan Development Bank for oil infrastructure development projects. This was reportedly the fourth such deal from January to April 2009 (Yang et al 2009).

Kazakhstan case study

China-Kazakhstan relationship

Driven primarily by economic, energy, and security interests, Kazakhstan’s relationship with China has steadily developed since Kazakhstan gained independence from Russia in 1991. Under the leadership of President Nursultan Nazarbayev, Kazakhstan has committed to a “multi-vector” approach to foreign policy that aims to maintain good relations with all countries of economic and political importance. China has assumed an increasingly significant role in this framework as a balance to Russia and the West as well as partner in promoting Kazakhstan’s economic development (Weitz 2012). With the exception of Russia, Kazakhstan has now become China’s most important strategic and economic partner in Central Asia (Weitz 2008). Chinese goals regarding Kazakhstan have included securing support in suppressing anti-Beijing Uyghur nationalists and reducing this perceived internal terrorist threat, granting Chinese firms access to Kazakhstan’s energy resources, and increasing opportunities to trade with and investment in Kazakhstan.

One unique factor that differentiates China’s relations with Kazakhstan from its relations with other Central Asian countries is the two states’ overlapping ethnic groups. Approximately 180,000 Uyghurs live in eastern Kazakhstan and an additional one million ethnic Kazakhs live in China. The Chinese government has expressed concerns over ethnic Muslim separatism in the Xinjiang Uyghur Autonomous Region, which encompasses about one-sixth of the land area of China. The region is home to about 20 million residents, and approximately half of the population is non-Han Chinese Muslim with ethnic and religious ties to neighboring Central Asian countries such as Kazakhstan. Ethnic unrest in Xinjiang could have repercussions in Kazakhstan where the local

population largely sympathizes with the Uyghur community. However, Kazakhstan's official response is to express solidarity with Beijing's policy of countering the terrorist threat, centered on the Uyghur-based East Turkestan Islamic Movement. Kazakh authorities, while allowing Uyghurs to practice limited degrees of political activity, do not permit Uyghurs to engage in unauthorized activities in China and have deported Uyghurs accused of terrorism by the Chinese (Moore 2004). To keep Central Asian states like Kazakhstan from supporting movements in Xinjiang, China has cultivated close diplomatic ties with its neighbors, most notably through the SCO. Although the SCO has evolved since its creation in the early 1990s, its primary focus is security, economic, cultural, and humanitarian collaboration between its members. The principal purpose of the SCO for China is to skew the political preferences of Central Asian governments towards friendship with China by means of economic development and security cooperation and regional stability (Hug and Zheng 2010). Kazakhstan also expects to derive economic benefits from its relations with China and the SCO as well as security and protection against potential separatism and fundamentalism.

China's energy security interests in Kazakhstan

China has sought to obtain a leading role in developing and promoting energy industries in Kazakhstan in order to maintain the rapidly expanding domestic needs within China. Kazakhstan is a major oil producing country in the region, second only to Russia, with estimated oil reserves at 30 billion barrels (U.S. Energy Information Administration). The discovery of Kazakhstan's Kashagan oil field, considered one of the five largest in the world, convinced Chinese leadership to start discussions with Kazakhstan on a potential pipeline connecting the two countries. The Kazakh-China Oil Pipeline (KCOP) was first proposed in 1997, but negotiations were suspended until more oil reserves were found to make the project economically viable. Construction officially started in 2004 when the two countries built a section from Atasu, Kazakhstan, to the border town of Alashankou, in China's Xinjiang Uyghur Autonomous Region. The KCOP, a joint venture between the China National Petroleum Cooperation (CNPC) and Kazakhstan's KazTransOil, is China's first transnational pipeline and Kazakhstan's third, having already constructed pipelines to Russia and Iran (U.S. Energy Information Administration). In 2011, construction finished on the final phase of the pipeline connecting the oil fields in western Kazakhstan to a refinery located in Xinjiang. The 2,798-kilometer pipeline (Figure 4) cost an estimated \$3 billion, but provides approximately 10 million tons of crude oil to China per year (Net Resources International).



Figure 4: Kazakhstan-China Oil Pipeline (KCOP)

SOURCE: "China's Worldwide Quest for Energy Security" *International Energy Agency* 2000

The completion of the pipeline also secured, for the first time, an energy resource that is beyond the striking capabilities of U.S. aircraft carrier battle groups, which have the ability to target Chinese supplies in the Middle East and Sudan (Liao 2006).

In addition to the KCOP, China acquired PetroKazakhstan (PetroKaz) in 2005, an international petroleum company registered in Canada but with all of its assets in Kazakhstan. Shortly after acquiring PetroKaz, which includes the largest refinery in Kazakhstan, CNPC transferred 33 percent of its shares to KazMunaiGas (KMG), the Kazakh national oil and gas company. As part of the deal, China obtained full ownership of the oilfield Kumkol South and a joint ownership of Kumkol North with Russia's Lukoil (Marketos 2009, 18). The Kumkol oil fields are located at the midpoint of the KCOP, so obtaining PetroKaz's assets over these oilfields has not only enhanced CNPC's oil reserves in Kazakhstan, but also the efficiency of the pipeline. By providing shares in both PetroKaz and the KCOP, China has diversified Kazakhstan's export markets and China's import sources, which helps Kazakhstan reach its ambitions to become a major oil exporter (Financial Times 2005) and enhances China's energy security (Liao 2006).

The Chinese government hoped that the pipeline would also foster political stability along the Central Asian border by creating jobs for Xinjiang's Uyghur population (Downs 2000, 27). However, Uyghurs in Xinjiang have argued that Xinjiang receives little benefit from its own energy reserves because "energy production is controlled by state-owned companies who are usually hiring Han Chinese rather than Uyghurs, consumed mostly by Beijing and coastal cities and taxed in a way that the central government gets most of the revenues" (Jehangir 2006).

China's investments in Kazakhstan

China's investment in Kazakhstan has increased substantially in the last ten years. According to the National Bank of Kazakhstan, China's cumulative foreign direct investment (FDI) through 2000 totaled less than \$500 million. However, in 2008 alone, Chinese investment totaled nearly \$700 million (O'Neill 2009). China has been Kazakhstan's second-largest trade partner since 2009 and its biggest export destination since 2010. In 2009, China's provided \$10 billion in loans to Kazakhstan in return for access to the Central Asian state's oil and gas sector. The CNPC provided \$5 billion to KazMunaiGas to support investments in Kazakhstan's energy sector including the purchase of additional oil companies as well as the construction of the Beineu-Bozoi-Akbulak gas pipeline, which will serve southern Kazakhstan. An additional \$5 billion was also provided by China's EXIM Bank to the Development Bank of Kazakhstan to stimulate the diversification of Kazakhstan's economy (Daly 2009). This agreement means that Chinese energy companies will control around 15 percent of Kazakhstan's 2009 total oil output. China's investments in Kazakhstan focus primarily on a "loan-for-oil assets" model. This type of transaction, which is in line with the Chinese government's preference for financing acquisitions, gives Chinese companies direct ownership of resources (Jiang 2009).

China's involvement in Africa

Historical context

Spurred by Mao Zedong's ideology, China's involvement in Africa began in 1956 and was driven by what China claimed to be a shared history of grievances as victims of Western imperialism and colonization and a strong will to cultivate and protect national sovereignty. Mao believed that developing nations could and should band together to develop themselves in a common struggle against the developed world. In doing this, the developing world could weaken the imperialist powers of the Global North and ultimately bring down those responsible for the developing world's grievances.

One of China's most notable projects in the early stages of developing its foreign aid in Africa was the TaZara Railway, also known as the Freedom Railway. From 1970 to 1976, Chinese workers labored alongside Tanzanians and Zambians to construct a 1,155 mile railway that cost about \$500 million (Sued 2012). China's move to assist in building this railway severed South Africa's grip on transportation in the region, and later contributed to the fall of the apartheid regime in South Africa (Wenping 2006). China continues to fund maintenance and innovation for the TaZara railway. In September 2011, it granted \$40 million in soft loans to fund rehabilitation and updated technology. Beijing has also waived large portions of the construction debt the Tanzanian and Zambian governments owed on the project (Semberya 2011).

China's involvement in Africa has grown, and continues to grow substantially, as Beijing vows not to abandon cultivating strong relations with the continent. As China's policies have shifted away from Maoist ideology towards economic growth and development, it has become thirstier for energy resources. Today China's aid policy no longer promotes African sovereignty or so-called third world solidarity as it once did.

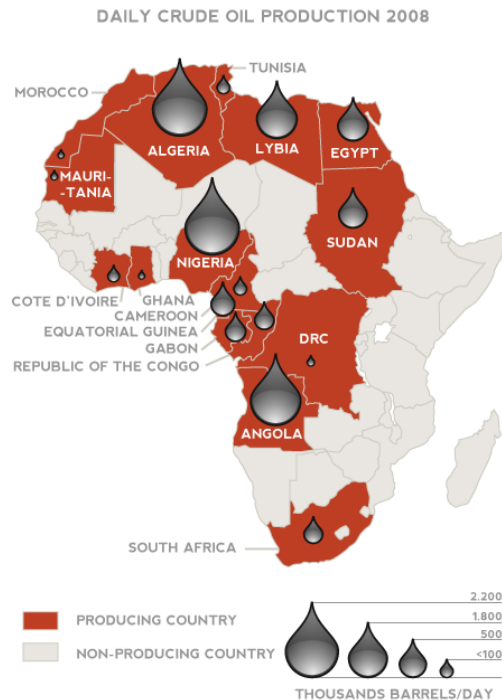


Figure 5: Oil in Africa

SOURCE: *Statis Incite* 2011

Between 1995 and 2006, Chinese oil companies invested \$7.99 billion in Africa alone, which includes crude and refined oil ventures. This accounts for 27 percent of overseas investment by Chinese oil companies. Projects are focused predominantly in Sudan, Angola, Algeria and Nigeria (Shaofeng 2009, 7-8). China's willingness to invest in ventures where American and European countries will not has earned it the title of Africa's largest single beneficiary of oil exports (Hodel 2008).

In 2010, the Sudan People's Liberation Movement vowed to protect Chinese oil investments and workers, ensuring the Chinese Communist Party (CCP) that the pipeline running through the country was secure (Sudan Tribune 2010). Since its split in July 2011, border disputes have erupted between South Sudan and Sudan over oil. South Sudan claims

an estimated 75 percent of oil reserves while the pipelines and refineries are in Sudan, which represents a serious threat to Sudan's economy (BBC 2012). As the largest investor in the Sudanese oil industry, China's involvement remains strong, while it continues to supply arms to the country as talks of friendship with South Sudan progress. China is urging restraint with the desire to continue business and protect its oil investments, but expresses no interest in acting as a diplomatic mediator in the conflict (Moshiri 2012).

Producing nearly 2 million bpd, Angola ranks as the second largest exporter of oil in Sub-Saharan Africa behind Nigeria (Index Mundi 2013). In 2007, China pledged \$20 billion over three years in investment, spending, and oil-backed loans. China's oil imports from Angola have at times surpassed those from Saudi Arabia, averaging 750,000 bpd. With investments eclipsing those of the World Bank by an estimated \$12 billion, China's ventures in Angola are distinguished from other nations in that there are no stipulations to improve transparency, corruption, human rights, or democratization (Cramer-Flood 2007).

Algeria, among the least diverse exporters in the world, produces 2.08 million bpd and exports 1.69 million bpd. In 2010, Algeria drew 97 percent of its total export earnings from the hydrocarbon market (U.S. Energy Information Administration 2012).

The IMF urges the country to diversify its economy and move away from its heavy reliance on oil and natural gas exports (IMF 2011). However, the continued government contracts signed with Chinese oil companies suggest that export diversification is not a priority for Algeria. China has been the driving force behind Algeria's construction boom, accountable for projects ranging from hotels, mosques, and malls to highways, prisons, and an airport. In 2010 Chinese firms attained \$20 billion in government contracts for construction projects in Algeria (The Washington Times 2010). Despite Algeria's OPEC membership, China is looking to secure more of Algeria's oil production in its energy security quest.

As the largest exporter of oil in Africa, international powers often have their sights set on Nigeria as a potentially secure source of oil. While China was blocked from entering the Nigerian market for quite some time, they continued to invest in infrastructure development projects and advancements in technology and telecommunications. Their investments ultimately paid off and Chinese companies gained access to Nigeria's resources in 2004. In July 2005, the two countries signed for \$800 million to guarantee China 30,000 bpd for one year (Hurst 2006, 11). Currently, China accounts for about 25 percent of Nigeria's FDI, which is approximately \$6.1 billion. With construction contracts in place for refineries, further infrastructure, and power plants, China, one of Nigeria's largest oil consumers, is likely to continue increasing its presence in the country (Abiodun 2011).

With less focus than Western governments and institutions on transparency, governance, and environmental and labor standards, China carries out a large share of infrastructure projects in countries considered volatile like Angola, the Democratic Republic of Congo, Sudan, and Zimbabwe. At the same time, attractive loan terms entice better-governed countries like Ghana and Mauritius. This counters criticism that China only invests in countries considered poorly-governed or unstable by the West. A more nuanced analysis shows that China cares ultimately about the resources it will receive and the opportunities for Chinese businesses to take hold and sell Chinese goods in the recipient country. This occurs more frequently in countries spurned by the West simply because a lack of competition from Western donors makes success more likely, not because China specifically targets "bad" countries. A Princeton econometric analysis found that "China's allocation of aid seems to be widely independent of democracy and governance in recipient countries" (Lengauer 2011).

Finance mechanisms in Africa

After China's first foray into major infrastructure development in Africa with the TaZara Railway, it continued to provide small amounts of aid to the continent. Owing to domestic economic priorities, China did not start to invest significantly in Africa until 1996, after a visit by Jiang Zemin. This followed on the heels of China's switch from net oil exporter to importer in 1993. Jiang's visit ushered in the era of strategic Chinese aid in Africa, with the broad goals of securing energy and raw inputs for its booming economy and markets for its exports (Lengauer).

African governments consider China an attractive partner because it will build large-scale infrastructure projects without requirements like transparency or improved governance imposed by the Paris Club and Bretton Woods institutions (Lengauer). China typically includes more traditional aid projects through grants, which build schools or provide medical care. These projects fill gaps in developing countries and quell opposition from civil society. China also provides military aid to unstable countries like Sudan and Zimbabwe. OECD donors, however, provide much more military assistance on the whole (Lengauer).

Concessionary loan agreements with China for infrastructure projects follow a similar pattern. Developing country governments propose a project to China EXIM Bank, whether a hydroelectric dam, railway, or telecommunications infrastructure, and China will build the project provided the recipient can pay for it with a resource. The loan does, however, come with stipulations. The recipient must use Chinese contractors, and 50 percent or more of the contract's sourcing must come from China, depending on the recipient. China EXIM Bank gives low interest loans for up to twenty years, although it sometimes grants a grace period (Corkin 2008, 3-16). From 2001 to 2010, China EXIM Bank lent \$67.2 billion to sub-Saharan Africa—\$12.5 billion more than the World Bank (Cohen 2011).

One common theme in China's development projects with its EXIM Bank is that China focuses on infrastructure, like railroads or telecommunications, which bring the recipient country and China closer. A modernized railroad ensures China can extract the resource backing the loan and gives Chinese companies a supply chain for exporting to the recipient country and region. Complex telecommunications infrastructure ensures the recipient's dependence on China for the short and medium terms. Stipulations requiring Chinese contractors and materials in a project allow Chinese construction firms to form a monopoly in the recipient country because of the sheer size of the project. Contractors and subcontractors, encouraged by the Chinese government, branch out to related industries and businesses in the recipient country.

Angola case study

China Angola relationship and historical context

Angola's brutal civil war lasted 27 years, from 1975 to 2002, which followed on the heels of the independence war against Portugal from 1961 to 1975. Over four decades of war left the country in shambles, and required immediate and massive investment in all areas of infrastructure and development. The victorious party, the MPLA (Movement for the Liberation of Angola - led by José Eduardo dos Santos), started cultivating investment partners before the civil war ended in the defeat of the National Union for the Total Independence of Angola (UNITA) (Campos and Vines 2008).

China first established ties with Angola during its war for independence from Portugal. China provided arms and training to the MPLA, UNITA, and a third independence movement, the FNLA (Campos and Vines), China did not recognize the

dos Santos government until 1983, though it started an unofficial economic partnership in 1979 (Angoterra 2008). From 1984, the two countries established economic relations. China reportedly supplied UNITA arms during the civil war, but it maintained relations with the MPLA. President dos Santos visited China as early as 1988, and again in 1998 (Campos and Vines 2008).

With the civil war over in 2002, the world warmed to the prospect of investing in mineral-rich Angola. Before the wars, the country exported food crops and possessed diamonds, copper, and oil. Minerals and fossil fuels helped fund the war. While Beijing's initial involvement with the war in Angola may have been ideological, China's relationship with opposing sides was strategic in maintaining its end goal of reaching energy security via Angolan natural resources.

China's energy security interests in Angola

Angola possesses proven reserves of oil ranging from 9.5 billion barrels (Index Mundi 2013) to 13.5 billion barrels, depending on the source of the estimate (Global Edge 2012). Most of its reserves lie offshore, divided into blocks. The civil war essentially prevented exploration on Angolan soil, so proven reserves may increase. OPEC limits the amount of oil Angola can export by approximately 0.2 million bbl/day. The country plans to construct another refinery, which would increase its refining capabilities by six times to 200,000 bbl/day sometime after 2015 (U.S. Energy Information Administration 2011). Angola also possesses 10.9 trillion cubic feet of natural gas, second only to Nigeria in Africa (U.S. Energy Information Administration).

China's investment in Angola

Without a major donor conference, Angola looked for partnerships outside traditional Western powers, the World Bank, and the IMF (Alves 2010, 4-7). In 2004 it signed an agreement with China EXIM Bank for \$2 billion to rebuild what remained of its infrastructure. The interest rate undercut European lenders by 0.75 percent to 1.25 percent, though it required an initial repayment of 10,000 barrels of crude oil per day (Alves 2010, 9). This per-day requirement would increase to as much as 120,000 barrels per day by the end of the seventeen-year loan. In 2007, China released the second \$1 billion tranche of the loan, and added an additional \$500 million after negotiations with

the Angolan Ministry of Finance. The countries then signed a \$2 billion loan securitized by oil aimed at education and health infrastructure. An Angolan Ministry of Finance employee noted that the loan with China EXIM bank made it easier to access finance from other sources including Western banks (Harzon 2011).

SOURCE: "Angola and China: A Pragmatic Partnership."
Center for Strategic and International Studies

Table 4: Projects Financed by EximBank of China (Phase I)

Sector	Number of contracts	Total Value (US\$)
Health	9	206,100,425.42
Education	8	217,158,670.63
Energy and Water	8	243,845,110.58
Agriculture	3	149,753,214.00
Transport	1	13,840,468.00
Social Communication	1	66,905,200.00
Public Works	1	211,684,100.65
TOTAL	31	1,109,287,188.28

Source: Angolan Ministry of Finance (2007).

The 2004 Angola concessional loan created a new model for infrastructure financing, after years of the West pouring money into white elephant projects in countries from the Democratic Republic of Congo to Ghana, which frequently yielded no results except for increased corruption. Angola first proposed its priority projects, which given the country's state at the time covered every conceivable area of infrastructure. The Angolan Ministry of Finance and the Chinese Ministry of Foreign and Commercial Affairs agreed on the priority projects and released a tender. China stipulated that 70 percent of the value of all contracts would go to Chinese companies and Angolan contractors would receive the remaining 30 percent. This arrangement did not cause much consternation for Angolan businesses because of the paucity of potential bidders resulting from decades of war. This setup blocks competent foreign contractors from participating. Three or more Chinese firms must bid on a contract and a joint Chinese-Angolan group then manages implementation.

China EXIM Bank directly deposits allocated funds to the appropriate contractors, reducing the number of hands it passes through and thus the potential for theft. Angola deposits oil revenues in an account on a continual basis, with China collecting the entire sum on project completion (Haroz). This funding mechanism can prove a win-win for China and the recipients. In the Angolan case, both parties receive what they want: China gets fossil fuels and Angola gets infrastructure. This win-win can differ from Western aid programs. A Western donor may measure success in jobs created, literacy rates, and maternal mortality rates, while China measures success narrowly in barrels of oil, tons of copper, infrastructure construction, and receipt of loan payments. For the recipient, a win with China means that it received what it wanted on purely commercial terms, with no meddling in governance. For a country like Angola, the interest rate on the loan matters more than the lender, although a deal with China can yield different undesired results, like large numbers of Chinese in the country (nearly a million across Africa), Chinese monopoly over sectors like civil construction, and ineligibility for donor funds or debt forgiveness from Western countries, the World Bank, or the IMF. On the other hand, experience gained with Chinese loans make recipients more likely to receive future loans from Paris Club financiers or commercial banks.

Analytic viewpoints

On ideology and criticisms

The World Bank estimates that there are 300 million Chinese citizens living in poverty (French 2008), and the massive gap between the rich and the poor brings criticism and potential instability from within China's borders (The Economic Times 2012). As the CCP battles its own insecurities domestically and internationally, it is careful in orchestrating and directing the news and public information. Silence on the issue of international aid from the government, in terms of a lack of detailed facts or clarity, is speculated to be a move to avoid domestic criticism.

The CCP is depending on continued economic growth to legitimize its rule within China and abroad. However, its tactical approach to secure energy resources raises

contention in the international community. The criticisms lie in China's indifference to domestic political strife in the countries it leverages and the ethical implications of the nature of China's involvement with them. Values of non-interference, camaraderie, and respect for state sovereignty are described by the Chinese as their driving ideological approach to international relations.

China contends that its foreign aid to Africa is driven by solidarity, the same ideology that created its Eight Principles and spurred its investment in the TaZara Railway. In 2011, the Chinese Vice-Commerce Minister, Fu Ziying, responded to criticism from the West by saying, "Just as Western countries abandoned newly independent Africa, the Chinese came. Sixty-nine sacrificed their lives and thousands labored with the Tanzanian and Zambian people. Why? For friendship" (Blanchard 2011). Despite China's attempt to deter criticism by releasing their first-ever foreign aid policy in print, the vague details of the nature of their involvement in Asia and Africa, recipients of 80 percent of the total aid, devalued their effort greatly.

China's desire to maintain discretion in its aid dealings fits well with Central Asia's desire for bilateral relations that are more non-interventionist than dealings with the United States and Russia. With corruption on the rise (Demirjian, 2011), the short term benefits the FSU governments are seeing from China's investments are highly valued. Money and infrastructure are being funneled in without the demand for accountability attached. Turkmenistan is one of the beneficiaries of China's non-interventionist and harmonious ideals, as the support of the Turkmenistan dictatorship earned China the first energy deal signed with a foreign country.

More recently, China's dealings with Sudan and South Sudan have been heavily scrutinized. As the largest investor in the nations' oil industries, China has a great deal to protect, but its exchanges with the governments counter stability initiatives. While China provides arms and supplies to militias accused of employing rape as a weapon of war and leaders poised to fuel further violent conflict, it defends its silence on the issue of human rights violations as a means of showing respect to the sovereignty and integrity of the nations. China has even gone as far as invoking its veto power in the UN Security Council as a means of blocking proposed sanctions and preventing UN peacekeeping troops from being sent to the area.

As China's economic and diplomatic power grows, it becomes less likely that the international community will be successful in pressuring the CCP to alter its approach in dealing with corrupt governments in developing nations. Currently, the tactics are working in China's favor, as the soft and hard power initiatives are bringing positive returns to the nation. However, the sustainability of China's energy use and aid remains questionable moving forward.

On claims of neo-colonialism and fueling foreign conflicts

While it professes concern for sovereignty, China's involvement in nations with weak governance has raised anti-Chinese sentiment and opposition in the domestic politics of those countries. Being that the Asian and African nations deeply involved with China are

known to sell large portions of land from under their citizens, backlash has surfaced and provoked colonialist accusations. At the same time, the lack of democratic processes in many of these countries hinders opposition activity.

The growing loan-for-oil trend in Kazakhstan has earned the Alga! unregistered opposition party political popularity. The leader, Vladimir Kozlov, has stated, "Chinese relations to resource exploitation have imperialist undertones" (Paxton 2011). The group contends that the issue of land grabs and absent legal protection is a result of both China's interests and the Kazakh government's corruption. In addition, there is growing concern that China might expand its Xinjiang border to incorporate more of Kazakhstan as a result of the latter's inability to repay its indebtedness to Chinese loans and investment. China has responded to accusations saying that it has no intention of monopolizing foreign countries' land and access to economic opportunity, while Kazakh opposition to "Chinese expansionism" maintains otherwise (Demytrie 2010).

In the 2011, Zambian anti-Chinese sentiment won Michael Sata the presidential election. Zambia, a nation rich in copper, coal, and other natural minerals, has been working closely with China for decades. However, contention over labor laws in Chinese-managed mines drove anti-Chinese sentiment (Gettleman 2011). During his presidential campaign, Sata declared, "Zambia has become a province of China....The Chinese are the most unpopular people in the country because no one trusts them. The Chinaman is coming just to invade and exploit Africa" (French 2011). Similar sentiments are reportedly emerging in other resource rich African countries, like Zimbabwe and Gabon, as China's aid structure and bid to secure energy and natural resources grows. Citizens that know Chinese business transactions and practices well are claiming that China is "hording African resources" and the attitude towards the Chinese as "colonialists" is swelling (The Economist 2011).

The political reality, however, is that China is providing infrastructure, services, and goods to nations with poor or corrupt governance. These governments see China's ventures as an economic gain with little to no incentive to alter their domestic governing practices. Although the citizens of these nations may harbor anti-Chinese sentiment, their ability to succeed in legally and politically protecting their resources is weak. Even Sata backtracked on his hard line towards China after taking office, as the Chinese influence was too deeply embedded in Zambia's structure to uproot as quickly and effectively as he had hoped.

On China's use of soft power

China's investment, economic development, and infrastructure support initiatives in Central Asia and Africa at first glance constitute traditional soft power plays aimed at building influence with weaker governments (McGiffert et al 2009). These initiatives in turn help Beijing improve access to resources and global diplomatic influence. The results have paid dividends in China's favor:

- Some eighteen countries, including Kazakhstan and several North African states, stood with China in protesting the 2010 selection of Liu Xiaobo for the Nobel Peace Prize, according to press (BBC 2010).
- South Africa denied the Dalai Llama's visa application in 2011 to attend a function in honor of fellow Nobel Laureate Desmond Tutu (Polgreen 2011).
- In 2011, Tajikistan ceded almost 400 square miles of territory to China, ending a long-standing border dispute.

China's aid recipients, however, may find it increasingly difficult to oppose China diplomatically, politically, or economically as they fall into increasing debt with Beijing. Most of the infrastructure aid support China is providing to Central Asia and Africa is in the form of interest-bearing loans—below-market interest, but interest nonetheless. China has poured billions of dollars in aid into some of these nations—one quote from a South Asian nation that receives Chinese aid is: “we could make payments for the next ten generations, but we will still remain indebted to the Chinese.” However, the recipient governments—typically repressive and corrupt regimes—benefit from bolstering solidarity with an economic superpower, which reduces the likelihood that they will eschew aid in the future.

This system of preferred loans to support infrastructure aid portends longer-term standoffs between the governments and their constituencies as local populations begin to uncover the long-term consequences. While resource-rich, the aid recipients typically have major income disparities with sizable portions of their populations living below their respective national poverty thresholds (Global Issues 2013). Infrastructure loan-aid could fuel anger and protest if these projects adversely impact local and traditional economies. This phenomenon emerged after completion of the Dushanbe-Chanak highway reconstruction project, an initiative China lobbied the Tajiks for and that is financed with a loan through its EXIM Bank (Neurope 2009). Improvements to transportation infrastructure are a necessary precondition for Beijing to facilitate trade, conduct surveys, and extract resources. Beijing likely upgraded the Dushanbe-Chanak highway project with the intention of connecting the major Central Asian cities to Xinjiang to reduce travel burden to these locations. One could argue that the Tajiks win because one of their major national highways has been modernized through the aid program, thereby greatly reducing travel time to the North and Uzbekistan. However, in 2010, a Central Asia Online report stated that Tajik locals were protesting the new toll system on their national highway—the recently upgraded Dushanbe-Chanak highway. The report described the meager incomes of many locals and how the cost to use the newly-improved road was prohibitive (Ibragimova 2010). The Chinese had come knocking for the Tajik government to pay the bill, and the government had responded by taxing their people for use of the highway. If Beijing's aid strategy aims to maximize the long-term value of foreign aid infrastructure deals to China, then domestic politics in the recipient nation likely will not impact future aid considerations unless the recipient government's challenges affect its ability to make loan payments.

On the sustainability of Chinese energy security-related aid

China holds approximately \$2.1 trillion in foreign reserves, some of which it uses to finance aid projects. This should not change in the short to medium term (Brautigam 2010). The price volatility of the natural resources developing countries use to securitize loans with China EXIM Bank, however, calls into question the sustainability of Chinese concessional loans. For example, during the 2007-8 economic troubles, oil prices fell by about 50 percent, significantly lowering the value of loans based on barrels of oil (The China Monitor 2010). Price fluctuations can greatly change the dynamics of Chinese contracts with developing countries, either with China receiving a lower value on its loans, or a recipient country facing domestic pressure to renegotiate loans or reclaim resources conceded to China. Investing in undiversified countries that rely on one resource for the majority of their export and tax earnings makes these deals extremely risky.

For recipient countries, inking deals with China EXIM Bank and others can put their debt forgiveness schedules with the IMF at risk. In 2009, the Democratic Republic of Congo renegotiated its concessional loan with China and signed a new loan program with the IMF. The Chinese loan increased the DRC's debt so significantly that it no longer qualified for IMF debt forgiveness (Wroughton 2009). Many potential target countries for Chinese investment in Africa carry large debt burdens and would hesitate to forgo possible debt relief for a Chinese concessional loan, especially if the IMF would provide a similar loan while maintaining the debt forgiveness plan. The size of Chinese loans makes it extremely difficult for countries with weak institutions and low human capital to manage them. As a result, many projects fail or yield lower results than promised.

It appears that in some ways critics overstate China's natural resources-based aid to developing countries. While the deals raise concerns about sovereignty and stalling progress on governance and democratization in certain developing countries, China and the West will likely converge somewhat in their approach. Initially, a country may go to China as the lender of last resort, but after successful repayment, Western commercial banks will lend to the recipient country and force China to compete. With energy prices skyrocketing, large oil producers like Angola and Nigeria can bargain hard with China. Western governments and businesses increasingly work with countries they find distasteful because of natural resource prices, causing direct competition with China. Experts say the construction quality and durability of China's projects, though initially inferior to Western standards, now compare favorably, clearly a benefit to recipient countries. China's willingness to design projects with developing countries will push the Paris Club and Bretton Woods institutions to do the same, instead of imposing projects from the top down.

Overall, the sustainability of China's policy of aid for energy security appears mixed. Financially, China appears able to continue its projects, especially given the return they generate in natural resource supplies, economic opportunities for Chinese businesses in the recipient countries, and opportunities to export to recipient countries. Countries' capability to manage Chinese megaprojects remains in doubt. Even potentially

rich countries like Angola cannot manage billions of dollars' worth of infrastructure projects, nor do they want too many Chinese in their country managing projects and expanding into related sectors. Finally, China will not likely maintain its ability to undercut Western donors on projects related to energy security as the West feels greater pressure to secure resources and all donors converge on loan terms and project quality.

Conclusion

As China's economy prospers, the CCP recognizes that continued economic growth is tightly coupled to secure, long-term sources of energy. It is no coincidence then that the two energy-rich regions evaluated in this report account for up to 80 percent of Chinese foreign infrastructure aid. This correlation is likely because the CCP has concluded its survival is contingent on sustained economic growth, and it has in turn financed its future by indebting nations that are quite literally sitting on the resources Beijing needs to continue to prosper.

Three factors pose near- and medium-term threats to Beijing's continued ability to underwrite access to energy resources through infrastructure aid development programs: growing domestic political discord in many of the Central Asian and African governments with which China partners; ineffective management of the increasing scope and cost of aid projects; and increasing competition with the West for loan contracts. While this report did not focus on domestic political challenges in the resource-rich Central Asian and African states, many of these countries present a stability risk for China's investments. Furthermore, as projects increase in size and scope, they become progressively challenging to manage.

Almost all of China's Central Asian and African partners have weak governance and corrupt leaders, to varying degrees. These features, coupled with reports that China is exploiting these states, have fueled both anti-Chinese sentiment and greater opposition to the local governments in these partner countries. To foster strong partnerships and limit backlash, China should demonstrate that the projects benefit the broader population, not just the political elite. At the current exponential growth rate of aid recipients' debt, China is ensuring that these nations remain linked to China diplomatically, politically, and economically. China's ability to sustain its "infrastructure aid-for-energy" model will depend on how leaders in Beijing navigate these issues.

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