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GRIDLINES 4

Sharing knowledge, experiences, and innovations in public-private partnerships in infrastructure

China's emerging role in Africa

Part of the changing landscape of infrastructure finance

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In 2006, which China named the "Year of Africa," it quadrupled its investment commitments to infrastructure in Sub-Saharan Africa, to $8.4 billion. In 2007 China committed another $4.5 billion. Such funds could make a significant contribution toward meeting Africa's infrastructure investment needs of almost $40 billion a year. In the power sector, where Africa faces some of its largest gaps, China is investing $5.4 billion in Africa's power sector, including $3.5 billion in projects that will increase the region's hydro generation capacity by 30 percent. China's growing role in Africa has generated much discussion. A new study seeks to add concrete numbers and solid analysis.

Introduction

Trade between Sub-Saharan Africa and China reached $36 billion in 2005, up from just $10 billion in 2001. Accompanying this boom in trade is growing investment by China in African infrastructure.

China's role in financing infrastructure in the region can be understood by looking at the evident economic complementarities. Africa counts among its development challenges a major infrastructure deficit, with investment needs estimated at almost $40 billion a year. China has developed one of the world's largest and most competitive construction industries, with particular expertise in the civil works critical for infrastructure development. China's fast-growing manufacturing economy is generating demand for oil and mineral inputs that has rapidly outstripped domestic resources. Africa is already a major natural resource exporter, and with enhanced infrastructure could develop this potential even further, accelerating economic development in the region.

China's commitments of infrastructure finance for Africa have grown substantially since 2003. They hit a range of $1.5–2 billion a year in 2004–05, peaked at an estimated $8.4 billion in 2006, and then fell somewhat to $4.5 billion in 2007 (figure 1). At least 35 countries in Africa have received financing from China or are discussing funding opportunities. And while about half the projects have involved financing commitments of less than $50 million, the amounts for single projects can be very large. Of around 40 confirmed projects, about half a dozen involved commitments from China of more than $1 billion each.

Structure of China's loans

China's approach to financial assistance, part of a broader phenomenon of south-south economic cooperation, differs from that of traditional donors. Unlike traditional official development assistance (ODA), the financing is channeled not through a development agency but through the Export-Import Bank of China. The Ex-Im Bank's loans account for the vast majority—some 93 percent—of China's infrastructure finance for Africa. Consistent with the rationale of promoting trade, the financial support is typically tied to the participation of Chinese contractors.

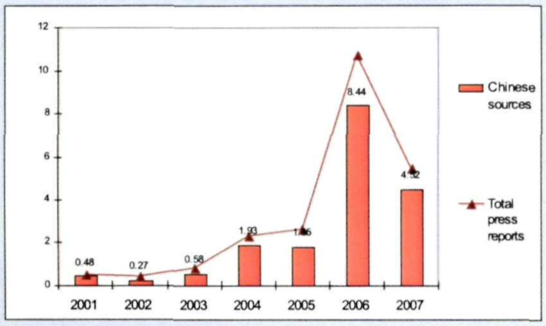
The typical infrastructure loan from the Ex-Im Bank is just on the threshold of what the World Bank and International Monetary Fund consider concessional, defined as having a grant element of at least 35 percent.[1] On average, China's

1 A grant element calculation used by the International Devel-

FIGURE 1

Big growth in financial flows from China

Annual commitments by China to infrastructure projects in Sub-Saharan Africa, 2001–07



Source: World Bank–PPIAF Chinese Projects Database, 2007

loans offer an interest rate of 3.6 percent, a grace period of 4 years, and a maturity of 12 years. These terms represent a grant element of around one-third. But there is substantial variation across recipient countries: the interest rate ranges from 1 to 6 percent, the grace period from 2 to 10 years, the maturity from 5 to 25 years, and the overall grant element from 10 to 70 percent.

The "Angola mode" relies on natural resources to repay infrastructure loans

For a growing number of infrastructure loans the Ex-Im Bank is using a deal structure known as "Angola mode," in which repayment is made in natural resources (figure 2). Under this arrangement, increasingly used for countries unable to provide adequate financial guarantees to back their loan commitments, the money is never directly transferred to the government. Instead, a framework agreement covering a program of infrastructure investment is signed with the government. The beneficiary government then awards the infrastructure projects, supported by a credit from the Ex-Im Bank, to a Chinese construction firm. At the same time it awards a Chinese petroleum company the rights to begin production of the oil or other natural resources that will constitute repayment of the loan.

opment Association (IDA) permits a standard comparison of financial terms across deals and establishes whether the terms can be deemed concessional. For any set of financial terms (including interest rate, grace period, and repayment period) the calculation determines the equivalent percentage grant component that would have to be applied to a standard loan at market terms in order to achieve the same financial profile as that offered by the loan in question.

Financial flows by sector

Most of China's infrastructure finance for Africa has gone to three sectors: power (especially hydropower), transport (especially railroads), and telecommunications (mainly equipment supply). Water projects attracted the least. Aggregating China's infrastructure finance by sector is difficult because of an inability to break down its line of credit for infrastructure reconstruction in Angola, estimated to be $3.4 billion. But a substantial share of this line of credit is known to have been targeted to the rehabilitation and expansion of railroads and to small-scale power schemes.

Looking at China's overall financing activity by sector shows a focus on the types of projects that expand Africa's natural resource development potential.

Power

By far the largest infrastructure gaps in Africa arise in the power sector. Generation capacity and household access in the region are around half the levels observed in South Asia and a third of those in East Asia and Pacific. China's central focus in this sector is on the construction of large hydropower projects. By the end of 2006 China had committed $3.5 billion toward the construction of ten major hydropower projects. Once completed, these will provide a combined generating capacity of more than 5,000 megawatts, a significant fraction of the 17,000 megawatts of hydropower generating capacity existing in Africa today.

Beyond hydropower, China has also been active in building thermal power stations. The most significant have been in Sudan, where China's support has helped add more than 1,200 megawatts of thermal generating capacity, and in Nigeria, where China National Machinery Import and Export Corporation has agreed to construct two 335-megawatt thermal power stations.

Rail

China's first big foray into African infrastructure was the construction of the Tanzania-Zambia railway in the 1970s, a project for which China followed up with an $11 million loan for rehabilitation in 2006. Recent years have seen renewed activity by China in the African rail sector, with financing commitments on the order of $4 billion. These include rehabilitation of more than 4,000 kilometers of existing railway lines and the construction of more than 1,000 kilometers of new railroad.

The largest deals have been in Angola, Gabon, Mauritania, and Nigeria. In Angola repairs to the 1,300-kilometer Benguela Railway line began in January 2006 under the line of credit extended by the Ex-Im Bank. In Nigeria, China has committed US$1 billion to help finance a project that includes a fast rail system between Lagos and Abuja and a light rail system connecting the airport to the Lagos city center. And in Gabon, China is preparing to build a 260-kilometer rail line as part of a $3 billion package centered on the Belinga iron ore reserve.

Roads

China has supported road projects across Africa. More than 20 recent projects with financing from China have been recorded, for construction and rehabilitation of more than 1,800 kilometers of road. But the total amount for confirmed road projects, at around $600 million, is substantially smaller than that reported for power and rail. Indeed, only two of the projects with financing from China exceeded $100 million, both of which were in Angola and part of the line of credit provided in 2004.

Telecommunications

China's involvement in telecommunications mainly takes the form of equipment sales to service providers. Some of these involve normal commercial contracts between Chinese manufacturers and public and private operators in Africa. But some entail intergovernmental financing tied to purchases of Chinese equipment by state-owned telecommunications incumbents.

The two largest telecommunications projects by far have been in Ethiopia ($1.5 billion) and Nigeria ($0.8 billion). Both projects have involved the rollout of national communications backbones and the associated rollout of mobile coverage in rural areas.

Another salient example is the National Communication Backbone Infrastructural Project in Ghana, agreed to in June 2006, which is aimed at rehabilitating and expanding fixed line communications technology in the country. The Ex-Im Bank is helping to finance this $70 million project, initiated by the Ministry of Communications, through a $31 million concessional loan.

Financial flows by country

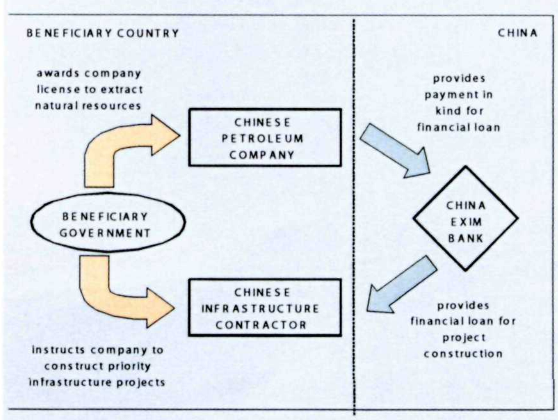
Cases of Chinese infrastructure finance were recorded in more than 35 countries across Sub-Saharan Africa. Nevertheless, despite this broad reach in practice there is a heavy geographic concentration of finance. Five countries (including Nigeria, Angola, Zimbabwe, Sudan and Ethiopia) together account for 75 percent of Chinese financing commitments; of which Nigeria alone accounted for nearly 30 percent. The rest of the funding includes sizeable volumes on the order of US$800-1,000 million provided to each of the following countries: Guinea, Ghana, and Mauritania.

The financial flows from China offer an important development opportunity for Africa

Nigeria

China's engagement in Nigeria dates to 2004, when its two telecommunications giants, Huawei and ZTE, began pursuing equipment supply and network rollout projects for fixed and wireless service in the country. In 2006 Ex-Im Bank financing was substantially scaled up as agreements were reached on almost $3 billion of projects. China's financing commitments in Nigeria now amount to $5.5 billion, including $3.5 billion for a major railway upgrading project and $1 billion for the 6,000-megawatt Mambilla hydropower project. Although the latter two projects are currently under review

FIGURE 3
How the "Angola Mode" works



by the authorities and it is not clear whether they will go ahead.

Angola

In Angola the estimated $3.4 billion line of credit extended by the Ex-Im Bank in 2004 is aimed at allowing the government to repair infrastructure damaged during the country's 27-year civil war. The initial $2 billion installment, advanced to the government in 2004, was backed by an agreement to supply China with 10,000 barrels a day of Angolan crude. The Center for Chinese Studies at Stellenbosch University, in South Africa, indicates that the interest rate on the loan has been lowered from the initial 1 percent to 0.25 percent, and that the loan has a 3-year grace period and a 15-year repayment term.

Zimbabwe

In response to economic sanctions imposed by many Western nations, President Robert Mugabe of Zimbabwe initiated his "Look East" policy in 2004, aimed at seeking greater cooperation and assistance from China and other Asian countries. Infrastructure finance from China was initially focused in telecommunications, where Chinese sources have financed $770 million in equipment purchases. After a number of unsuccessful attempts, Zimbabwe also managed to persuade China to invest in its struggling power sector. Under a $1.3 billion agreement signed in 2006, the Chinese government will provide financing, to be backed by chromium exports, for the construction of new coal mines and three thermal power stations.

Sudan

Since 2001 China has committed more than $1.7 billion in support of Sudan's broader infrastructure development needs. The early infrastructure projects with Chinese support developed coal- and gas-fired thermal stations, adding more than 1,200 megawatts of new thermal generating capacity. By far the highest-profile power project in the country is the 1,250-megawatt Merowe dam, where construction has been under way since early 2004. At the time the contracts were signed, this massive, $2 billion hydropower project was the largest international project in which China had ever participated.

Ethiopia

In Ethiopia, where China's engagement amounts to $1.6 billion, its activities began in 2003 with projects in the power and road sectors. But the main focus of China's infrastructure finance in the country has been the telecommunications sector. In 2006–07 China agreed to provide financing for the Ethiopia Millennium Project to create a fiber-optic transmission backbone across the country and roll out the expansion of the cellular GSM network.

Conclusion

Sub-Saharan Africa lags behind other developing regions on most standard indicators of infrastructure development. That has prompted African leaders to call for greater international support in this sphere. They have typically welcomed China's fresh approach to development assistance, which eschews interference in domestic affairs and emphasizes partnership and solidarity among developing nations. China's new role creates challenges for governments and civil society actors. But despite the potential challenges, Chinese finance offers an important development opportunity for Africa, reaching a scale large enough to make a material contribution toward meeting its vast infrastructure needs.

GRIDLINES

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