

China in Africa

A Macroeconomic Perspective

Benedicte Vibe Christensen

Abstract

In recent years, China has dramatically expanded its financing and foreign direct investment to Africa. This expansion has served the political and economic interests of China while providing Africa with much-needed technology and financial resources. This paper looks at China's role in Africa from the Chinese perspective. The main conclusion is that China, as an emerging global player and one of Africa's largest trading and financial partners, can no longer ignore the macroeconomic impact of its operations on African economies. Indeed, it is in China's interest that its engagement leads to sustainable economic development on the continent. Trade, financing, and technology transfer must continue at a pace that African economies can absorb without running up against institutional constraints, the capacity to service the costs to future budgets, or the balance of payments. A key corollary is that China should show good governance in its own operations in Africa. Finally, macroeconomic analysis needs to be supported by better analytical data and organization of decision-making to support China's engagement in Africa.



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Center for Global Development
1800 Massachusetts Ave., NW
Washington, DC 20036

202.416.4000
(f) 202.416.4050

www.cgdev.org

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Foreword

I am delighted to sponsor this working paper on China's role in Africa by Benedicte Vibe Christensen. Benedicte has worked for nearly three decades as an economist at the IMF. Her paper provides a new outlook on this discussion, analyzing China's growing relationship with the African continent. This paper is commissioned as part of CGD's work on the involvement of new donors and emerging players in the global development arena. There is no doubt that China's influence on the African continent has exponentially increased in the past decade, whether in terms of trade, investment, infrastructure projects, or access to natural resources. Yet there is much debate surrounding the implications of their growing role and what it might mean for the poorest of the poor and the development of African countries. What this paper contributes is a new analysis from the other side of the relationship: what operations in Africa might mean for China, how foreign assistance and development affairs are conducted within China, and where there is room for necessary improvement. Benedicte explains why the Chinese cannot operate with a blind eye toward the macroeconomic impact of their engagement, and why it is in their interest to focus on the sustainability of African development. As the Chinese scale up their operations, it is also necessary for them to review practical issues such as coordination, transparency and timely analysis of data. There is the potential to make this a "win-win" situation for all parties involved; Benedicte's work contains valuable insights as to how this might happen.

Vijaya Ramachandran
Senior Fellow
Center for Global Development

I Introduction

In recent years, China has dramatically expanded its financing and foreign direct investment to Africa. This has been mutually advantageous, serving the political and economic interests of China while also providing Africa with much needed financial resources and technology. China's relationship is not new but an intensification of the links that have existed for centuries.

This report deals with China's role in Africa *from the Chinese perspective*. It examines China's strategy of "going global" in Africa and how important Africa is to China's own trade and financing. It discusses the decision-making process in China and the availability of information, both in and outside China. It draws attention to how China's operations can influence the macroeconomic situation in African countries.

The main conclusion of the paper is that China, as an emerging global player and one of Africa's largest trading and financial partners, can no longer ignore the macroeconomic impact of its operations on African economies. Indeed, consistent with its own Africa Policy, it is in China's interest that its engagement is compatible with sustainable economic development in the continent. This will require that Chinese trade, financing and technology transfer are provided at a pace that African economies can absorb without running up against institutional constraints, the capacity to service the costs to future budgets, or the balance of payments. A key corollary is that China show good governance in its own operations in Africa. Finally, macroeconomic analysis needs to be supported by better analytical data and organization of decision-making to support China's engagement in Africa.

II Elements of a Successful Framework for China-Africa Relations

What are the opportunities and risks for China of a long-term engagement of China in Africa? Certainly, it is potentially a vast market for Chinese exports. Africa has a population of 1 billion (of which 800 million in sub-Saharan Africa) against China's 1.3 billion. Moreover, by historical and global standards the growth performance of Africa—and of sub-Saharan Africa-- has been strong at around 6 percent per annum during 2004-08, though interrupted by a slowdown in 2009 related to the global recession. This is partly due to improved economic policies but also to a favorable global environment. Africa is thus a continent of emerging economic strength and opportunities. In addition, the continent has raw materials, such as oil, cobalt, copper, iron ore, manganese, and uranium, which are needed to sustain China's own impressive growth performance. Ideally, therefore, China's relations with Africa should support a symbiotic relationship in which rapid development in Africa complements China's own economic objectives. In sum, Africa has a lot to offer China.

If China is interested in a long-term economic relationship with Africa, its transactions must contribute to sustainable economic development. If Africa can achieve balanced growth and avoid macroeconomic disruptions such as might be caused by inflation or the stop-go effects of high fiscal or external debts, it will be a “win-win” situation for both parties. The risks of such a relationship are political, economic, and reputational:

- *Political risks.* Africa has made progress in political stability and governance in recent years. The number of state-based armed conflicts in sub-Saharan Africa has declined. However, significant risks remain. In the words of Kofi Annan at the 50th celebration of Cameroon’s independence on May 19, 2010 commenting on Africa as a whole: “... *there is still a way to go. There are still too many instances of corruption, of elite capture of resources, of growing inequality in wealth and opportunity, abuse of electoral processes and selective adherence to the rule of law*” (Annan, 2010).
- *Economic risks* are related both to global conditions, including developments in raw material prices, and to economic policies in African countries. While much progress has been made in improving fiscal and monetary policies, institutions remain weak.
- *Reputational risks* are also important for China. Large Chinese enterprises are bidding for contracts in other continents as well. How they do in Africa is an important test, which is watched closely by the rest of the world. Issues such as future debt problems in Africa, procurement and labor practices, and the impact on the environment are very important for China’s international reputation.

All these risks need to be managed. They have implications for the profitability and sustainability of China’s operations in Africa, and a coordinated approach in each country and region is necessary. It is also in China’s interest to follow what other countries are doing in Africa, both regarding aid and commercial transactions. While China might want to preserve a different approach to development aid, export financing, and foreign direct investment in Africa (e.g., conditionality of loans and operational modalities) than other countries, it increasingly needs to consider its operations from a position of a responsible global player with an important seat in the international organizations and G20.

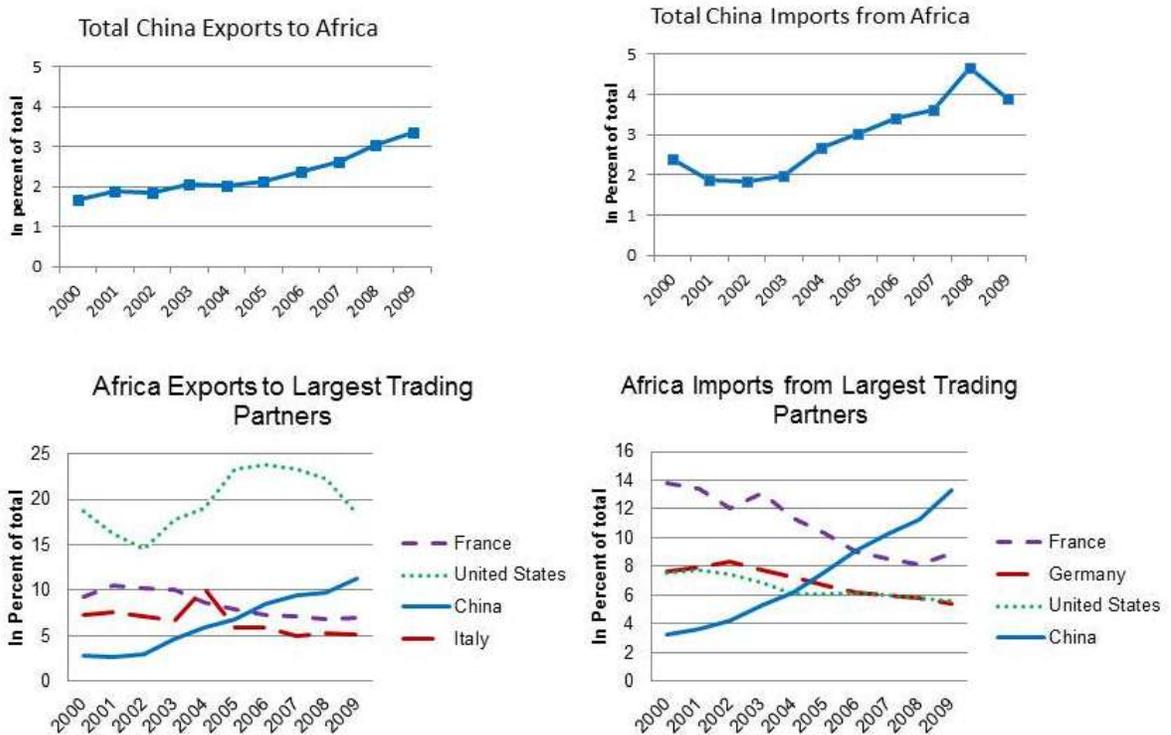
III How Important is Africa for China?

Trade

Although trade with Africa still makes up a relatively small share of China’s total external trade, it is growing rapidly and is concentrated in commodities that are essential for China’s own development and growth. Between 2000 and 2009 China’s trade with Africa has risen as a share of its total from 1.7 percent to 3.4 percent of China’s exports and 2.4 percent to 3.9 percent of its imports (Chart 1 and Table 1). The overall volume of trade is not as

important for China as its composition (Chart 2 and Broadman, 2007). By 2009, China was importing about half its domestic consumption of crude oil and oil products, and Africa (specifically Angola, Nigeria, and Sudan) accounted for about 30 percent of its total imports of these products. For a comparison, the United States imports a larger volume of oil and oil products from Africa but the continent accounts for a smaller share (about 20 percent) of US imports (Chart 3). In addition, China depends crucially on Africa for its imports of cobalt (more than 80 percent), mainly from Gabon, South Africa, and Ghana. Africa also accounts for a significant share of China's imports of timber (mainly from Gabon, Republic of Congo, and Cameroon) as well as of chromium (South Africa, Madagascar, and Sudan).

Chart 1. China and Africa: Largest Trading Partners, 2000-2009

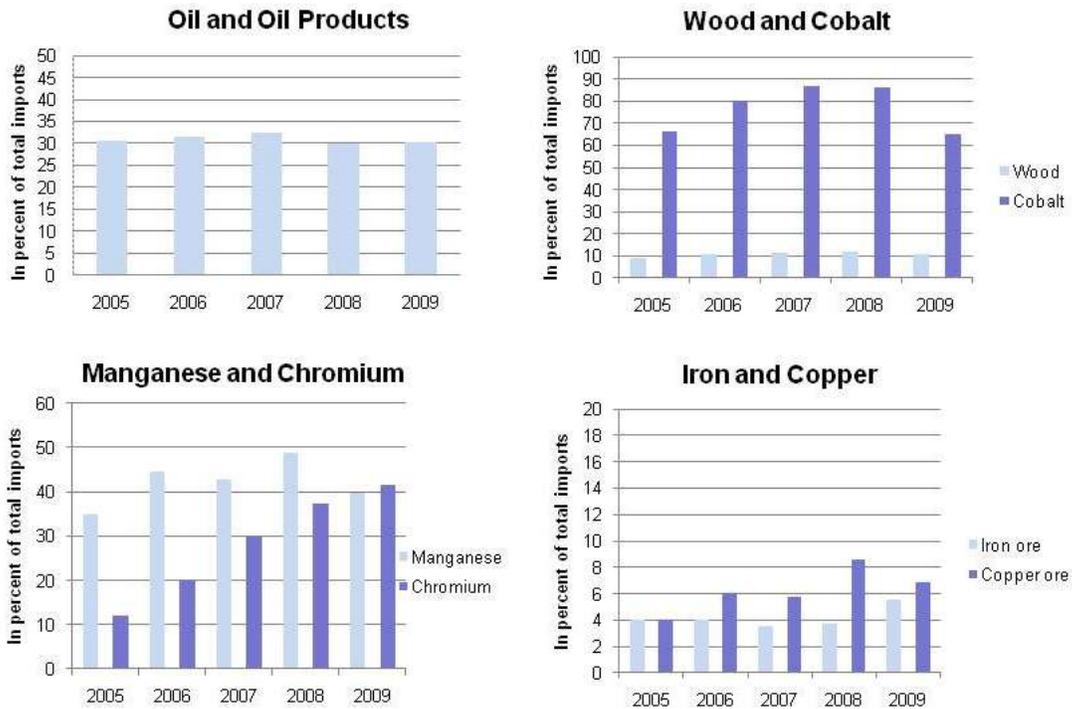


Source: IMF, Direction of Trade

From the African perspective, China clearly holds more importance as a trading partner than vice versa. Taking exports and imports together, China has already overtaken the United States as Africa's largest trading partner. By 2009, China was Africa's second largest export partner after the United States having surpassed France, Italy, and Spain (Chart 1, lower panel). Exports to China have grown from 2.9 percent of Africa's exports in 2000 to 11.2 percent in 2009, well ahead of any of the other BRIC countries (Brazil and India accounted for about 2 ½-4 percent of Africa's exports in 2009, and Russia just 1 percent). Energy and mineral products are the main exports. On the import side, China was the largest trading

partner of Africa accounting for 13.4 percent of Africa’s imports in 2009 compared with just 3.3 percent in 2000. During the 1980s and 1990s, imports from China used to consist mainly of textiles, garments, light industrial products and food, but since 2000 high value-added products have increased their share, e.g., machinery equipment, automobiles, electronics and telecommunications equipment. Mechanic and electronic products now account for more than 50 percent of Africa’s imports from China (CAITEC, 2010).

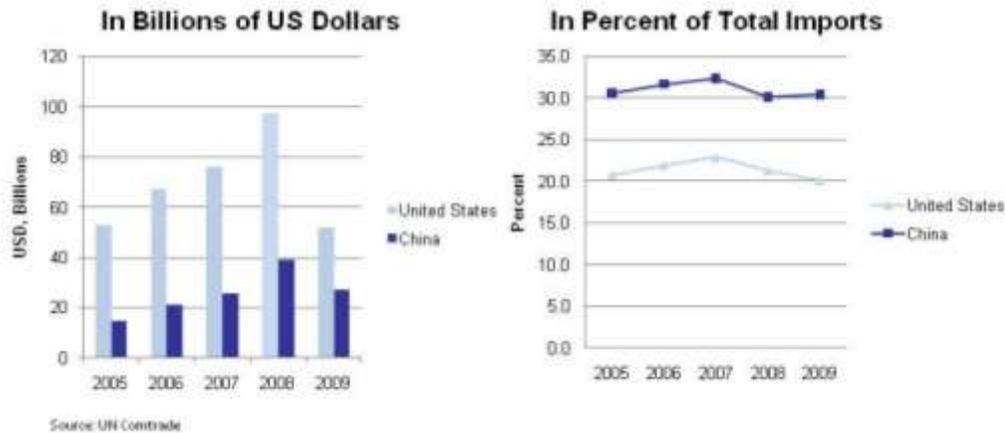
Chart 2. China: Imports of Raw Materials from Africa¹, 2005-2009



Source: UN Comtrade

1. Africa comprises Northern and sub-Saharan Africa

**Chart 3. China and the United States:
Imports of oil and oil products from Africa, 2005-2009**



Financial transactions

In recent years, aid and particularly nonconcessional financing from China to Africa have increased significantly. In addition, private or semi-private flows from China to Africa are increasingly important, including foreign direct investment (Wang, 2007). But in the absence of comprehensive data on financial transactions, the magnitude of these flows remains a guesstimate.

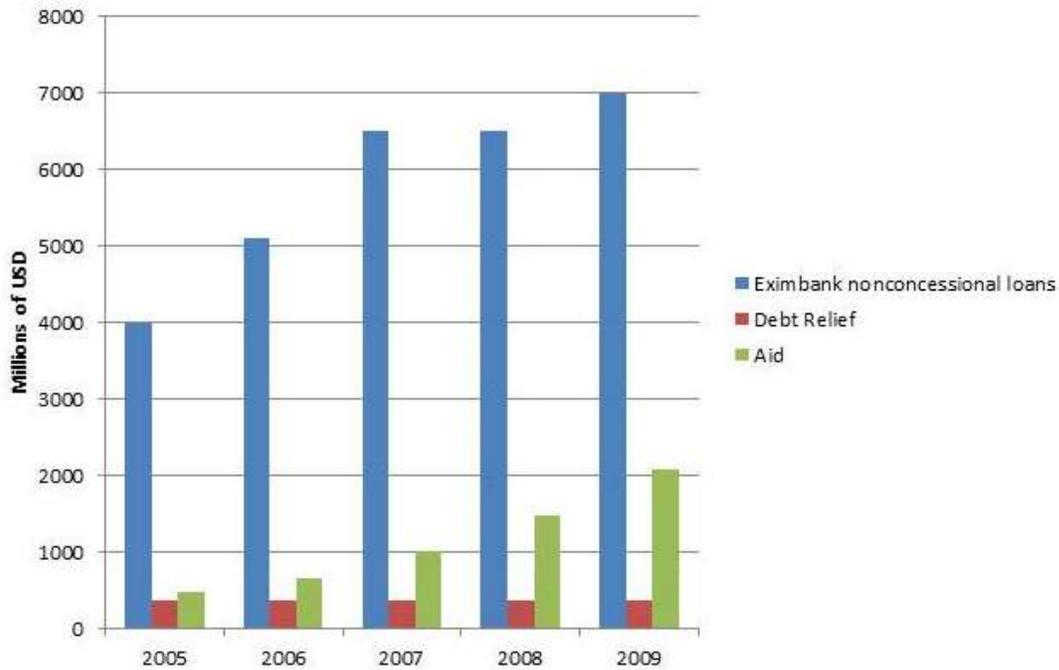
Aid

In 1950, China—itself a major aid recipient—began to give aid to other countries, mainly in Asia and Africa. China has had aid programs with most countries in Africa, namely those that recognized One-China¹. Recipient countries include those with higher per capita income than China, e.g., Botswana, Mauritius, and South Africa. Aid consists of grants and zero-interest loans from the Ministry of Commerce and concessional loans from China Eximbank. Aid disbursed by other ministries such as humanitarian aid by the Ministry of Civil Affairs and Ministry of Defense might not be captured. In addition, some provincial

¹ One-China policy refers to the policy by the People’s Republic of China (PRC) towards other countries to recognize the PRC government in Beijing as the sole legitimate government of Mainland China and Taiwan. Countries seeking diplomatic relationship with the PRC must break official relations with Taiwan. By August 2010, all but four African countries (Burkina Faso, The Gambia, Sao Tome and Principe, and Swaziland) had established diplomatic relations with PRC rather than Taiwan.

governments are also disbursing aid, which is not included in the figures, although it is estimated to be small. Thus, the estimated figures are likely to be smaller than the actual amount of aid.

Chart 4: External flows from China to Africa, 2005-2009¹



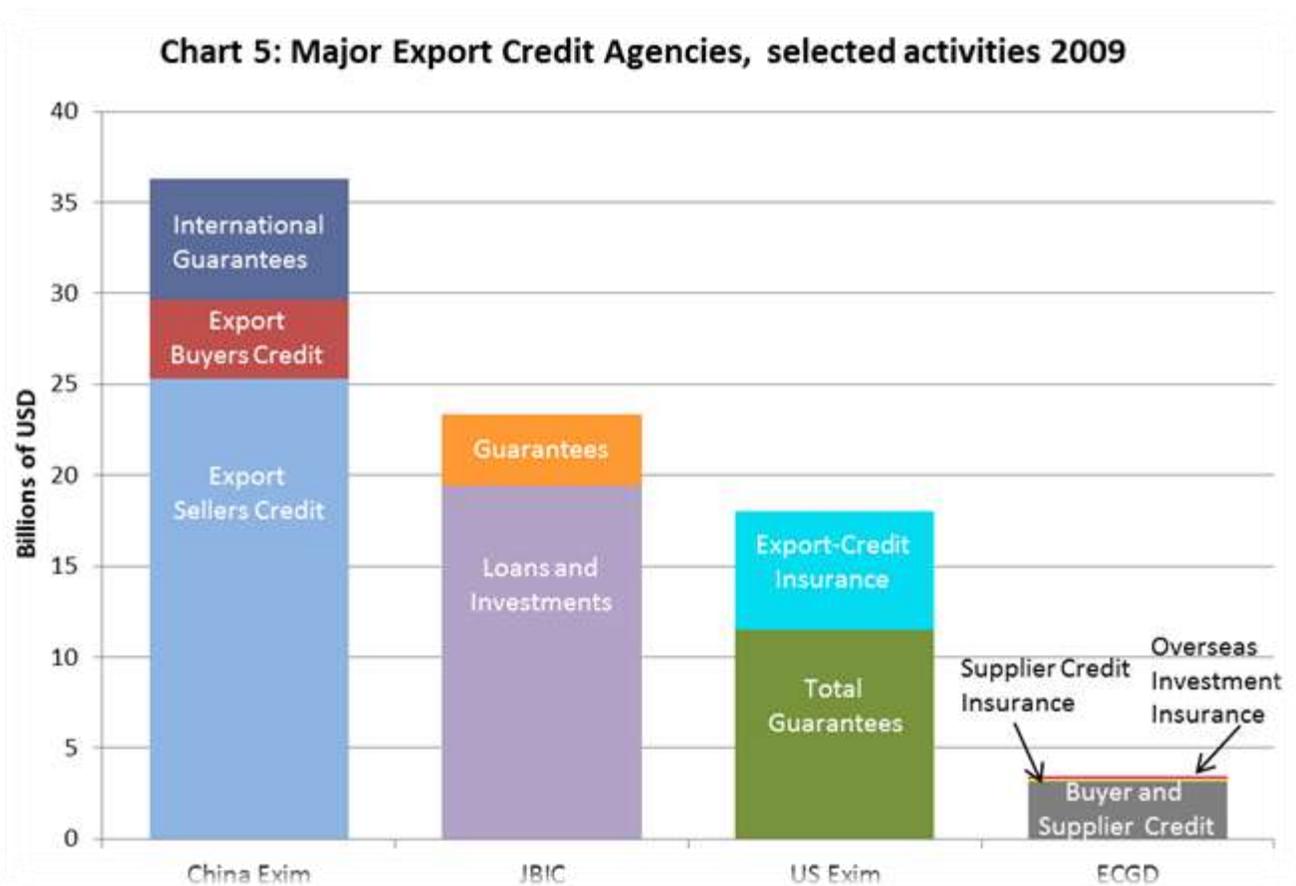
Sources: Deborah Brautigam, *The Dragon's Gift* (updated by the author); World Bank, *Building Bridges, China's Growing Role as Infrastructure Financier for Sub-Saharan Africa*, 2008.

1. The figures for Eximbank lending are on a commitment basis, while those for aid are on a disbursement basis and therefore not strictly comparable.

Aid is estimated to have increased from about \$0.3 billion in 2001 to \$2.1 billion in 2009 (for methodology, see Table 2). A large part of this increase is due to concessional Eximbank loans, which are estimated at about \$1.5 billion in 2009. In fact, Africa is estimated to have accounted for about 30 percent of China Eximbank's concessional aid disbursements in 2009 but a higher share of its commitments. China rarely gives cash aid but mostly gives aid tied in large part to the delivery of Chinese goods and services. Based on information on selective country cases, the final maturity seems to be 10-20 years, at an interest rate of 2-4 percent, and a grace period of 3-7 years (Hubbard, 2007). Even with the recent increase in aid, China still accounts for only one third of that of the United States (\$7.2 billion in 2008 (OECD, 2010)), and less aid than provided by France (\$3.4 billion) and by the United Kingdom and Germany (\$2.6-2.7 billion). However, it is difficult to compare the level of concessionality between China and other donors, because of missing information about the concessionality of China's aid.

Official nonconcessional loans

The nonconcessional lending of *China Eximbank* is rising rapidly and is larger than other major export credit agencies (Chart 5). By end-2005, China Eximbank had accumulated a total of \$6.5 billion in export credits to 35 countries in Africa, which rose to \$11.6 billion by end-2006. The annual commitments are estimated to have risen from \$5.1 billion to around \$6-7 billion per year during 2007-09, based on indications made by the China Eximbank President Ruogu Li (Brautigam, 2009).



Sources: 2009 Annual Report of the Export-Import Bank of China, 2009 Annual Report of the Export-Import Bank of the United States, Japan Finance Cooperation, JBIC Annual Report 2009, and 2009-10 Annual Review and Resource Account of the Export Credits Guarantee Department (UK).

Note: Data for China is for 2009 disbursements, U.S. for 2009 authorizations, Japan for FY2008 disbursements, and UK for FY09/10 issuances. Figures do not include official development assistance. Currency conversions are based on average 2009 exchange rate.

The World Bank estimates that only about 10 percent of Chinese-financed infrastructure investments are directly linked with natural resource extraction (Foster, 2009). In addition,

China Development Bank, which primarily focuses on finance in China, had committed non-concessional loans of about \$1 billion to Africa by March 2007 and an estimated \$2 billion by September 2010. In November 2006, the Chinese government announced its intention to establish a *China Africa Development Fund (CADF)* for an initial amount of \$1 billion, as part of the China Development Bank (CDB), which was to grow to \$5 billion over a few years. The operations of this Fund were earmarked for Africa and intended to support equity investments by Chinese companies in Africa. It leverages equity investments by those enterprises and can potentially support a much larger amount of investments. In January 2010, for example, the China Ministry of Commerce indicated that the CADF had invested nearly \$540 million to support 27 projects in Africa, which was likely to lead to investment of about \$3.6 billion by Chinese companies in the continent. It is expected that \$1 billion will be fully committed by end-2010 and the CADF has started raising the second round of capital of \$2 billion to reach \$3 billion.²

Private flows

Private flows include those of state-owned enterprises and private companies. While the largest flows probably originate from state-owned enterprises, an increasing number of small and medium-sized Chinese enterprises operate in Africa (Gu, 2008) to have access to the local market and because of intense competition in domestic markets. The volume of private flows from China to Africa is even more difficult to gauge than that of official flows. A part of them is believed to go through Singapore, the Cayman Islands, or other off-shore territories and therefore not necessarily be attributed to China. The number of Chinese companies that are active in Africa has increased significantly in recent years and might be as many as 2,000.

Although foreign direct investment from China to Africa has picked up in recent years, China still accounts for a relatively small share of total FDI flows in Africa. The flow of foreign direct investment (FDI) is notoriously difficult to estimate, since such investment is often not categorized correctly. Based on UNCTAD (and China's Ministry of Commerce) statistics, the stock of Chinese FDI in Africa was estimated at \$7.8 billion at end-2008 or about 4 percent of China's total outward direct investment stock and 2 percent of Africa's total FDI, but in all likelihood, these figures are significantly underestimated. By end-2008, Chinese investors had set up around 1,600 companies in Africa (CAITEC, 2008). The leading recipients were South Africa followed by Nigeria, Zambia, Sudan, Algeria, Mauritius, Tanzania, Madagascar, Niger, Congo, Egypt, and Ethiopia. While the larger part of foreign direct investment has gone into natural resource extraction, more recently telecommunications, construction and banking have also been targets for such investment.

² China Daily (<http://english.sina.com>).

For example, in 2007, the Industrial and Commercial Bank of China (ICBC) purchased 20 percent of Standard Bank of South Africa for \$5.5 billion, which also supports Chinese enterprises operating in Africa. Significant investments have also been made in manufacturing, fisheries electric power, ports, tourism, agribusiness, water systems, and waste management (Broadman, 2008 and CAITEC, 2010)).

Complementarity of financing

China's financing to Africa complements that provided by other financiers, according to the World Bank (Vivian Foster, 2009). Traditional bilateral donors have tended to fund social infrastructure projects such as water and roads, whereas China (and other emerging donors) has focused on production-oriented infrastructure such as power generation and railways. Public Private Partnerships, in turn, have tended to focus on information and technology investment.

IV China's Africa policy

Chinese aid and other official financing differ from that provided by other donors or financiers in several respects:

- Aid is committed to most countries in Africa, while other key bilateral donors tend to focus on a smaller group of countries.
- Financing is largely focused on infrastructure investments, where China has particular expertise and Africa acute needs.³ Chinese investments come as a package deal with financing, operators, and a very quick gestation time for aid-financed projects. This is very attractive to African governments who have argued that traditional bilateral and multilateral donors have taken too long to implement projects.
- Part of export credits and other financing for infrastructure investments is linked to extraction of natural resources through "infrastructure for natural resources" deals. These arrangements are rather complicated to implement, as they require close coordination between enterprises, financial institutions, and the government.
- Aid is extended without economic policy conditions; the only requirement is support of the One-China policy. This philosophy is rooted in the Five Principles for Peaceful Coexistence (see below).

³ The World Bank estimates that Africa lags behind all other regions of developing countries in infrastructure endowment (except in infrastructure in communications and technology). The largest gaps are in the power sector with access to power much lower than in South Asia. The World Bank also estimates that the two largest recipient sectors for Chinese investments are power (mainly hydropower) and transport (railroads).

- The relationship between the government, state enterprises and financial institutions is much closer in China than in other countries.
- Finally, the lack of a colonial past and similar experience as developing countries also seems to have promoted a trusting relationship between China and African governments.

The contacts between China and Africa can be traced back to the second century BC during the Han Dynasty. The most important period was during the Ming Dynasty, where early Chinese explorers came to Africa with silk, porcelain, and lacquer ware and brought back ivory, amber, herbs, and medicinal remedies to China. Contacts were relatively minimal until African countries gained independence during the early 1960s. Initially, aid was guided largely by political considerations, including the desire to gain support for the “One-China” policy and issues within the UN system. Since 2000 bilateral trade and investments have risen exponentially motivated by both political and commercial interests covering almost all sectors in the economy.

In many respects, China’s efforts in Africa have been shaped by China’s own experience of development. Early on, the Chinese tried to speed poverty reduction in certain provinces of their own country through the provision of grants or aid but realized that commercial incentives were important for achieving results. The Chinese government has also recognized the importance of infrastructure investment to boost economic growth and has gained significant experience in this area. Similarly, Special Economic Zones (SEZ) or industrial parks (e.g., for manufacturing, construction materials, or mining-related industries) have been used successfully in China, an approach China is now replicating in Africa (this paper does not deal with the SEZ, a relatively new area of intervention). The importance of this South-South learning experience cannot be underestimated.

In January 2006, for the first time, the Chinese government issued a *White Paper on China’s Africa Policy*. It was based on the *Five Principles of Peaceful Coexistence*—mutual respect for each other’s territorial integrity and sovereignty, mutual non-aggression, mutual non-interference in each other’s internal affairs, equality and mutual benefit and peaceful co-existence. Indeed, these principles are key to understanding why China does not attach policy conditionality to its aid. The “One-China” policy is the political foundation for the relations between China and Africa. China’s African Policy of January 2006 aims at “promoting the steady growth of China-Africa relations in the long term...” It also targets “economic win-win cooperation” and promises that “China will work together with Africa in the exploration of the road of sustainable development.” Thus, the focus is on a long-term and sustainable relationship and development of Africa.

The framework for cooperation is discussed by the *Forum for China and Africa Cooperation* (FOCAC), which was established in 2000. It meets every three years, most recently in November 2009, with ministerial participation from 49 African countries and China. The

purpose of the Forum is to promote “Pragmatic Cooperation” by strengthening consultation and expanding cooperation and “Equality and Mutual Benefit” by promoting both political dialogue and economic cooperation and trade. In connection with the Forum, Chinese leaders have made specific commitments on financial assistance. These commitments have become more significant since the third Forum in November 2006 and the fourth Forum in November 2009 (Box 1). In particular, in 2006, the Chinese government committed itself to doubling development assistance to Africa over the next three years and to providing \$5 billion in preferential credits and export credits as well as debt relief on zero-interest loans granted before 2005. Various official indications suggest that these commitments were realized.

Box 1: Commitments under FOCAC III (for 2007-2009)

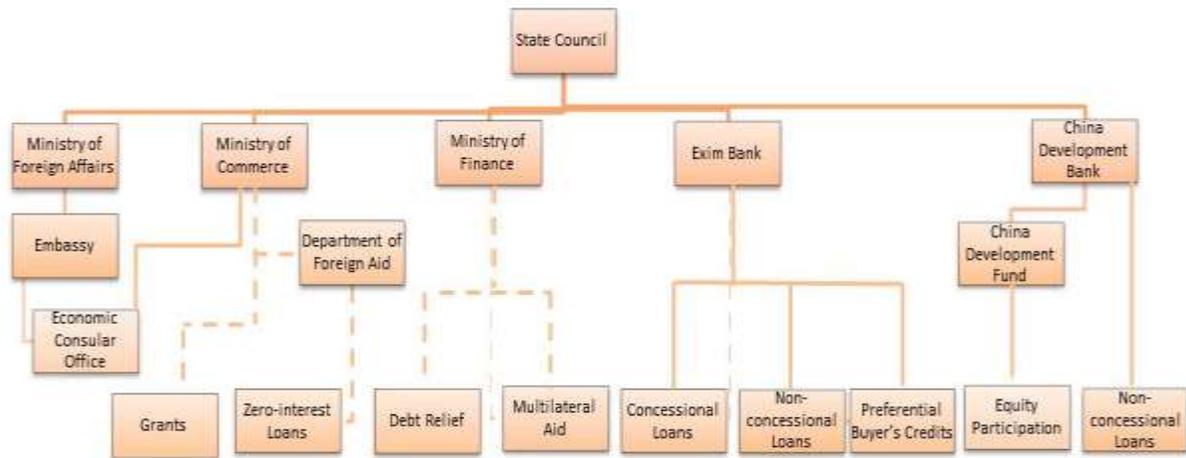
- Continue to provide development assistance to African countries to the best of its ability and to double the size of its assistance to African countries between 2006 and 2009.
- Provide US\$3 billion of preferential loans and US\$2 billion preferential export buyer's credit to African countries in the next three years on more favorable terms, more so for HIPCs and LDCs in Africa.
- Cancel government interest-free loans to HIPCs and LDCs with diplomatic ties to China that were due by the end of 2005. Take an active part in debt relief operations for Africa within the international multilateral framework.
- Actively participate in bilateral and multilateral assistance plans for African countries in post-war reconstruction, humanitarian rescue and poverty reduction.

Commitments under FOCAC IV (for 2010-12)

- Establish a China-Africa partnership to address climate change; to build 100 clean energy projects for Africa.
- Enhance cooperation with Africa in science and technology and carry out 100 joint research projects for demonstration purpose.
- Help build up African financial capacity, China will provide US\$10 billion of preferential loans to African countries and support Chinese financial institutions in granting special loans to small and medium-sized African businesses.
- Further open up China's market to African products, China will phase in zero-tariff treatments for 95% of the products from the least developed African countries.
- Further enhance agricultural cooperation with Africa, China will increase the number of agricultural technology demonstration centers to 20, send 50 agricultural technology teams, and train 2,000 agricultural technicians for Africa.
- Deepen cooperation in medical care and health, China will provide medical equipment and anti-malaria materials worth RMB500 million and train 3,000 doctors and nurses for Africa.
- Enhance cooperation in human resources development and education, China will build 50 China-Africa friendship schools and train 1,500 school principals and teachers for African countries.
- Expand people-to-people cultural exchanges and facilitate more exchange and cooperation between scholars and think tanks.

During the most recent FOCAC IV meetings, further commitments of \$10 billion in preferential credits were made for the period 2010-12, in addition to a number of other measures to support African countries. This is on top of non-preferential China Eximbank loans and loans from other official banks, so total preferential and non-preferential financing is likely to be at least \$20 billion. Such financing is less concessional than aid from traditional donors and resembles rather exports credits from traditional lenders. Indeed, this is part of the Chinese philosophy. In the words of President Ruogu Li of China Eximbank, “for projects that are expected to have economic returns or be financially viable, less concessional financing or even commercial loan should be allowed if concessional financing is not adequate” (Li, 2006).

Chart 6: Organization of Aid and Official Financing Decision Making¹



1. This figure excludes the provision of humanitarian aid that is provided by several ministries

Who makes the decisions on aid and other official financing? The State Council (cabinet) oversees foreign aid (Chart 6). It approves the annual aid budget, as well as grants above a certain minimum threshold and aid to “politically sensitive countries”. China has several ministries involved in the delivery of aid. The Ministry of Commerce distributes grants and zero-interest loans. The administration is carried out by the Department of Foreign Aid with only about 100 staff and no overseas offices. This Department, although small, is the central agency for aid. It does not control all the aid instruments but the vast majority of them.

The Ministry of Foreign Affairs has co-responsibility with the Ministry of Commerce for drafting the annual plan for aid. It is also responsible for the FOCAC. The Ministry of Finance deals with debt relief and aid through the multilateral institutions. In addition, several other ministries are involved in foreign aid. Finally, concessional loans are distributed through the China Eximbank, thereby also implicitly recognizing the close links between trade, investment, and development.

As mentioned above, China differs from traditional donors by having closer links with the state banks and state enterprises, which are often effectively involved in the implementation of China's policy in Africa. This makes for a very complex set of relations. The Chinese government does not control the increasing transactions by private Chinese firms. From a policy perspective, the issue is whether the work of different actors is well coordinated to promote the policy developed at a higher political level. This has increasingly become an issue due to the significant growth of China's operations in Africa. Thus, it may be necessary to adapt the organization and coordination of aid or aid-like operations to the new reality of China's role in Africa.

V Macroeconomic considerations for allocating assistance to Africa

Let us first step back and look at past experience with development financing to Africa. As we know by now, a large part of the debt accumulated by African countries in recent decades was unsustainable because it was not used to finance productive investments but financed in part "white elephants", i.e., prestige projects of the recipient countries without adequate economic returns. The selection of investment projects was not based on sound economic criteria. In addition, the fiscal situation of many economies was very weak, budget systems and governance were in a poor state, and the governments lacked financing to both service the debt and support recurrent spending associated with the investment projects. As a result, a large part of the projects fell in disrepair. This was the case with projects supported by traditional donors and China alike. Indeed, China has gone back to rehabilitate many of them (e.g., the Tanzania-Zambia Railroad leading from the copper mines in Zambia to the port in Tanzania).

When discussing China's engagement in Africa, it is also necessary to take into account that the African continent is not homogeneous. Africa consists of 53 countries ranging from emerging countries in Northern and Southern Africa to low-income countries in sub-Saharan Africa, including several post-conflict countries. These countries have quite different institutional capacities to formulate and implement policies. Although improvements have been made over the last ten years, the administrative capacity is still limited in many cases. Therefore, ideally China's engagement with Africa should take into account such different capacities.

Looking ahead, it is in China's interest that the projects in Africa are sustainable. If the projects are either not completed or fall into disrepair along the way, their economic returns will be limited and thus will hinder the economy's capacity to repay the loans (unless they are backed by natural resources). The economic return of a project may also be affected by the availability of infrastructure, e.g., mining. Finally, if projects are not sustainable, this would affect the general growth prospect of the economy and therefore China's commercial interests.

When China's financial involvement in Africa was relatively minor, e.g., building a new sports stadium or hospital, its macroeconomic impact could be largely ignored. This is no longer the case. As China's role grows, its operations have a larger impact and it is in China's interest to consider how its financing influences the macroeconomic conditions in the recipient countries. This does not mean that China has to abandon its policy of noninterference in the internal matters of the recipient countries through policy conditionality. But it means that the size and allocation of its financing and operational modalities should be informed by macroeconomic considerations. Any assistance should fit the absorptive capacity of the country. It also means that China might consider whether it needs a new process for discussing macroeconomic issues with the recipient countries.

Scaling Up of Capital Inflows--Dutch Disease?

What are the main ways in which large Chinese-financed infrastructure projects could create macroeconomic problems for an African country? As usual in economics, it depends on a number of factors (see Gupta, Powell, and Yang, IMF, 2006). Large inflows of foreign capital or aid—whether from China or another financier—have an impact on the macroeconomic situation of the recipient country. Such inflows can influence the exchange rate and the competitiveness of the economy. If external financing to a country is scaled up, the currency of the recipient country might appreciate, which would make the tradable goods sector less competitive (“Dutch disease”). The impact depends on the use or absorption of the additional external financing.

For illustration, let us differentiate two extreme cases. In one case, the entire additional external financing is used to pay for domestic labor, goods and services. This would lead to some upward pressure on domestic wages and prices depending on how close to capacity the economy is running, which would result in an appreciation of the exchange rate in real effective terms to the detriment of the export sector. In the other case, the increase in financing is matched fully by an increase in imports because financing is tied to imports from the creditor country. If, additionally, foreign labor is brought into the country to perform work (e.g., from China), it does not lead to any adverse impact on domestic wages or inflation. Any increase in financing leads to an increase in imports and the external current account balance deteriorates by the same amount. Similarly, if external financing goes to the government, both expenditure and the budget deficit would increase by equal amounts.

This being said, from the recipient country's perspective, it is always a sensitive and legitimate issue whether external financing leads to domestic value added by using domestic goods or services. For instance, African countries would like to see the use of domestic labor rather than mainly Chinese labor to reduce domestic unemployment. The additional benefit of domestic employment is that local labor is trained in maintenance of

the project (training and technology transfer), another important condition for the sustainability of an investment project.

If there is unemployed labor, there might be little reason to expect any major upward increase on domestic wages (Nkusu, 2004). However, wage pressure could occur if there is an unemployed labor without the appropriate skills and skilled labor can only be attracted by bidding up wages in competition with other domestic activities. To the extent that Chinese financing has been associated with the use of Chinese labor, it is likely that Dutch disease associated with Chinese financing has been limited. In practice, the use of local labor has varied a great deal among projects.⁴ When investments have financed much needed infrastructure such as power projects, this likely has removed constraints on growth, thereby mitigating any Dutch disease effect. It is also probable that China's aid has been associated with relatively large import content and certainly larger than social sector aid financed by traditional donors. This also suggests that the Dutch disease effect might have been small.

If Chinese financing is associated with a large component of domestic goods and services or labor, the potential impact on the economy could usefully be discussed with the recipient government. Economic models exist that could help guide the impact on macroeconomic variable of scaling up foreign aid or external assistance.⁵ The scenarios and spending plans are based on sector-level analyses that the UNDP prepared in coordination with the World Bank, the African Development Bank, and country authorities. The assessments suggest that, depending on country-specific factors and policy responses, increased aid can have a positive medium-term impact on economic growth and that the negative effects on inflation and real exchange rates can be manageable. It would be consistent with China's focus on growth that it is sensitive to those issues.

⁴ For example, surveys suggest that Chinese companies employed local labor in a ratio of one to eight or nine for each Chinese employee in a project in Tanzania versus the opposite ratio in a post-conflict country like Angola, where the appropriate skills were initially missing (Brautigam, 2009). This is also supported by Broadman's (2007) data that show great variability in the use of local labor by Chinese firms in Africa.

⁵ Work has been done or is underway by the IMF, with the UNDP, to undertake scaling up exercises of aid in the following African countries: Benin, Central African Republic, Ghana, Liberia, Niger, Rwanda, Sierra Leone, Tanzania, Togo, and Zambia; see SM/08/306, at <http://www.imf.org/external/np/pp/eng/2008/091908a.pdf>; and IMF Working Paper WP/10/160 at <http://www.imf.org/external/pubs/ft/wp/2010/wp10160.pdf> and Finance & Development, September, 2010, Andrew Berg and Luis-Felipe Zanna, <http://www.imf.org/external/pubs/ft/fandd/2010/09/berg.htm>.

Public expenditure management systems

Because some Chinese projects in Africa are very large, they risk overwhelming local public investment plans. And with the local financing component for recurrent spending down the road, there are major risks that the projects are either not carried out or maintained. It is thus in China's interest to coordinate with broader public investment and fiscal planning of the country.

China's Africa Policy indicates that investments in Africa should foster sustainable development. An integral part of efficient use of resources for the public sector—whether central government or state enterprises—are well-functioning public expenditure management systems (PEMs). This would include a proper and well-prioritized public investment program that is consistent with the medium-term fiscal policy of the recipient country. If the country does not have a well-functioning PEM process, public investment projects might not be consistent with the growth projections or include proper allocations for maintenance spending on the investment projects.

Many African countries—particularly low-income countries—have PEM systems that still need improvements. In fact, among low-income countries those in sub-Saharan Africa are weaker than those in Asia, Latin America and transition countries.⁶ The countries in sub-Saharan Africa score particularly poorly on transparency about the budgetary process, which can be a major problem in resource rich economies. When official Chinese institutions invest in or guarantee financing to African economies, it would be useful for them to check whether the investment projects are part of the recipient countries' own prioritized investment program, which would serve to safeguard their sustainability. Of course, the responsibility for prioritizing such investment projects rests with the recipient governments.

China has had a unique experience in scaling up infrastructure investment. The key to successful scaling up was, in part, a policy of nearly full cost recovery, i.e., in the case of electricity, raising electricity prices for users to provide for payments of both future debt service, and the cost of operations and maintenance; in the case of railways to raise the official tariff rates for cargo to generate needed revenue; and in the case of roads, to introduce cost-recovering tolls (Dollar, 2008). Thus, the government budget was not impacted by the financing of the infrastructure investment. In most cases, such pricing policies do not exist in African economies, but governments there could surely benefit from learning about China's own experience.⁷

⁶ Budget Institutions and Fiscal Performance in Low-Income Countries, IMF Working Paper, WP/10/80

⁷ Africa's Infrastructure—A Time for Transformation, World Bank, 2010.

Debt sustainability

One of the areas where there has been most controversy around Chinese finance in Africa is debt sustainability. Africa's experience, particularly in sub-Saharan Africa, is that of unsustainable debt that has had to be written off by both bilateral and multilateral donors. As China is becoming a large financier of Africa debt sustainability could be a problem in the future if it does not take the African countries' macro capabilities into account. For the non-concessional lending by China Eximbank, which is the larger part of official lending, there is a general expectation of repayment and no rescheduling of the debt. It could be argued that the risk of a write-off of such debt might be a small problem for China because of the order of magnitude of such debt relative to the external reserves of China. More serious, by contrast, is the economic disruption that might ensue in the recipient countries leading to halting of supply of raw materials, loss of export markets, and reactionary politics such as nationalization of mines. Those risks cannot be ignored.

As mentioned above, China has a policy of non-interference with domestic policies. China also focuses on the profitability of each project. The view is that as long as projects are financially viable, there is no reason to consider the macroeconomic consequences. Indeed, as expressed by the President of the China Eximbank, the Debt Sustainability Framework (DSF) of the IMF and the World Bank is too static and does not consider the "development sustainability" of the projects (Li, 2006). Moreover, the DSF is not suitable for evaluating each project. Do the Chinese have a point? Is the DSF too backward-looking, ignoring the potential beneficial impact on economic growth of the investment projects? Should a project that is projected to generate adequate economic return go ahead even if other elements in the economy are not doing well? It all depends. Let us take the arguments one by one.

The DSF was approved by the Boards of the Bank and the Fund in April 2005. Since then, it has been reviewed several times, most recently in 2009, as reflected in the January 2010 staff guidance note (IMF, 2010)⁸. On the one hand, it has to be recognized that investment projects can have a beneficial impact on the growth rate. On the other, staff projections have tended to be optimistic in the past and there remains much academic debate as to whether a relationship between public investment and growth can be established. The latest guidance note does acknowledge this fact. It indicates that a Debt Sustainability Analysis (DSA) should include a discussion on the determinants of growth, including public investments. Specifically, it mentions as a major change the need for "*Assessing more systematically the impact of public investment on growth*". The staffs should carefully and judiciously assess the impact of public investment on growth, including by considering the

⁸ <http://www.imf.org/external/np/pp/eng/2010/012210.pdf>

use of detailed empirical analyses where a scaling-up of public investment is ongoing or imminent, or where the conditions for such a scaling-up exist.” But it also indicates that prolonged growth accelerations are rare and even if individual projects have high rates of return, the macroeconomic returns tend to be considerably lower, since they are modulated by factors outside the scope of the project itself. “

In several respects, China and African countries might have had different situations. For example, China’s development was largely financed by domestic savings, not external borrowing. Africa and China might also differ in terms of their ability to carry out investment projects, different fiscal situations, and security situation. This means that the profitability or viability of each project can be affected by factors beyond the control of that project. For instance, if there is not enough domestic financing (from a company or government) to finance the maintenance of a project, it might not yield economic returns

Box 2: “Angola Mode” or Resources for Infrastructure

China’s oil-backed financing deals with Angola—the so-called “Angola Mode”—were motivated by high financial risk. In March 2004, China’s Eximbank financed a US\$2 billion line of credit to Angola used partly to finance infrastructure projects in electricity, roads, water, telecom, and public works and partly projects in health, education, and fisheries. The terms were allegedly LIBOR plus 1.5 percent to be repaid in 10,000 barrels of crude oil per day. Since the oil deliveries were fixed, the repayment terms fluctuated with the price of oil, with faster repayment when the oil price increased. Initially, the repayment term was 12 years after 3 years grace period. About 70 percent of the projects used Chinese companies through a tendering process. In 2007, two other lines of credit of US\$0.5 billion and US\$2 billion, respectively, were agreed. The repayment was apparently extended to 15 years and the interest reduced to 1.25 percent over LIBOR and the local content of the projects was increased.

For China, the “Angola mode” allowed China Eximbank to lend when adequate financing assurances were not present while also packaging infrastructure deals with oil deals. For Angola, it provided financing for much needed infrastructure and other sectors when financing from commercial sources were either not available or not under so favorable terms, while Angola was not yet committed to borrow from the IMF (this later occurred in November 2009 after the fall in oil prices). Oil-backed loans have been used by other official creditors in the past but are generally not consistent with the practices of official export credit agencies because they earmark export proceeds for certain external creditors. They also complicate the restructuring of debt, should it become necessary. Finally, it is difficult to calculate the effective terms of the lending, in part because of the flexible repayment schedule and uncertainty about the oil price underlying the deal. Since 2001, China has agreed similar “Angola Mode” arrangements with repayments in oil, bauxite, iron, chromium, and cocoa in at least 8 cases (Republic of Congo, Sudan, Angola, Nigeria, Guinea, Gabon, Zimbabwe, and Ghana) for more than US\$3 billion. (Source: Foster, 2009)

because it would fall into disrepair. Similarly, if there is not sufficient technical expertise locally to run a project, it might not be viable. A project can be financially viable but not economically viable as measured in terms of the sustainability of a country. Balancing these considerations, it is fair to say that while some scope exists within the current DSA framework to argue the case for higher debt levels at various levels of concessionality (the DSA was recently made more flexible in IMF-supported programs), further refinement of the analytical tools are called for to take account of the growth impact of projects, however difficult this might be. In addition, more practical application to individual projects would facilitate the use of the DSA by donors, e.g., when investment has a clear link to foreign exchange or fiscal revenue. This, in turn, would require donors/financiers like China to disclose more information on the projects, e.g., selection criteria and likely rates of return.

To illustrate the possible macroeconomic considerations of debt, let us take the examples of Angola and Democratic Republic of Congo (DRC). Since 2004 China has supported Angola, a post-conflict economy, with credit lines to finance infrastructure and other projects to be repaid in oil (Box 2). This was not a new practice in Angola but had been applied by other traditional donors as well as by other emerging donors before used by China. For a country that was not yet creditworthy to tap international credit markets and also had not established a policy record or got the seal of approval from the IMF, the backing of a loan by natural resources was the only way of raising money. For China, it reduced the commercial risk while China received oil. Indeed, China effectively became a preferred creditor. However, oil-backed loans are not materially different from other debt-creating flows except that they are securitized through future production and delivery of oil. It is a foreign debt that needs to be repaid. It also means that the equivalent amount of export proceeds would not be available for other purposes in the economy. Thus, it is crucial that the resources are used for the projects that are most needed to boost growth in the economy and that spending is consistent with medium-term fiscal sustainability of the country. Indeed, Angola was hit by the fall in oil prices in connection with the global financial crisis in 2008-09, and its fiscal spending proved unsustainable. Therefore, as part of the new program negotiated with the IMF in November 2009, the Angola government indicated “To facilitate the convergence toward a sustainable fiscal position, we plan to establish an institutional framework that de-links the fiscal stance from unpredictable oil revenues and ensures that a larger proportion of windfall oil revenues is saved” (IMF, 2009⁹).

Loans through state-owned oil companies backed by oil also tend to suffer from opacity in the conditions of the deal, which carries a risk of harboring corruptive practices. The opacity might also reduce government revenue that would otherwise be generated from the export

⁹ <http://www.imf.org/external/np/loi/2009/ago/110309.pdf>

of oil. If one country participates in an oil-backed deal, others will inevitably follow. The risk is that a very large share of future exports will be encumbered. Moreover, external creditors might hold back on other financing, thus also affecting available financing. In addition, collateralization does not necessarily offer full protection in case of a major exogenous shock (e.g., collapse in commodity prices), as the borrowing country might decide to stop commodity delivery. In conclusion, resource-backed loans might seem attractive in the short term but over time they could have an adverse impact on the economy and both directly and indirectly affect China's commercial interests.

Box 3: Debt Deals in Democratic Republic of Congo

In April 2008, the DRC signed a cooperation agreement between a Congolese parastatal mining enterprise (GECAMINES) and a consortium of Chinese enterprises, forming a joint venture company (SICOMINES). The original agreement included a US\$3.2 billion mining project and US\$6 billion in public infrastructure projects to be implemented in two phases over the period 2009-17. The agreement was amended in October 2009 to exclude the second phase of public infrastructure investments projects of US\$3 billion, leaving just the first phase of infrastructure projects of US\$3 billion (2009-13). Similarly, the original agreement, which included a public guarantee on the loans for the mining and public infrastructure projects, was modified to remove the public guarantee.

The \$6.2 billion Sino-Congolese Cooperation Agreement, as amended, involves a US\$3.2 billion mining component and a US\$3 billion infrastructure component. The **mining investment** is to be financed by a US\$1.1 billion interest-free loan along with a US\$2.1 billion loan with an interest rate of 6.1 percent.

The US\$3 billion **investment in public infrastructure** is to be financed by a series of loans to be disbursed for the individual projects, each with an interest rate set to LIBOR plus 100 basis points, with a ceiling of 4.4 percent. All loans are denominated in US dollars. The consortium of Chinese enterprise provides the DRC government with a US\$250 million signing bonus disbursed in two tranches. The mining parastatal GECAMINES also receives a US\$100 million signing bonus to be disbursed in two tranches.

Source: IMF (2010).

In the case of the DRC, a cooperation agreement of initially US\$9.2 billion was signed in 2008, which was subsequently scaled down to US\$6.2 billion over concerns about its impact on debt sustainability of the country. The scaling down of the loan amount and the delay in receiving debt relief under the Enhanced HIPC Initiative and the Multilateral Debt Relief Initiative could have been avoided if the details of the Agreement and its financing had first

been discussed in detail with the authorities (as well as the staffs of IMF and the World Bank) before it was signed.

Governance

Extraction of natural resources has often been associated with lack of transparency and corrupt practices, both in the countries that have the assets and in those that are extracting them. The country that owns the natural resources clearly holds primary responsibility for safeguarding the natural resources and good governance associated with their extraction. But other countries or industries that obtain extraction rights also bear a responsibility for employing good practices and procedures so as to minimize the scope for corruptive practices. As Paul Collier has pointed out in his recent book, *The Plundered Planet*, governance is the main factor safeguarding growth performance of a commodity exporter. Unfortunately, it is often those countries that have particular problems with governance.

If China is concerned whether its financing in Africa contributes to sustainable development, it might show a good example in its own operations, although—to be fair—Western governments have not always done so. In “infrastructure for natural resources” deals, the concession to natural resources is normally negotiated without any competitive bidding. Similarly, the infrastructure projects financed by the Chinese are not always subject to competitive bidding. Ideally, to secure the best value for the money, infrastructure projects would be subject to a competitive bidding process (also if it is confined to Chinese companies) evaluated by an independent party to the deal. This could be a requirement for providing financing or guarantees from Chinese sources. This would be a matter of getting good value for its money or the effectiveness of Chinese lending, and it is at least as important as the financial terms of the loans. Transparency on the cost of the rights of concession for the natural resources and the value of the infrastructure projects would help the general public in the recipient country. African countries have gone through a process of increased democratization and they are accountable to civil societies for their actions. Therefore, the process for extracting natural resources must also change to reflect the political realities of each country. This does not mean that China is imposing conditions on a country but that it is employing best practices in its own commercial operations and exercises some degree of oversight when public money or guarantees from China is involved.

Information on financial flows

A good starting point for better macroeconomic analysis would be improvements in the underlying economic information and data. China is not a member of the OECD/DAC aid

reporting system, and it does not itself publish comprehensive data on its foreign aid.¹⁰ There is apparently no single, official definition used by all Chinese aid agencies (Broadman, 2007 (Box 5.12), Davies, 2008, and Brautigam, 2010). To be sure, Chinese officials are very well aware of the OECD/DAC definition of aid, but this definition has not been adopted officially, nor does there seem to be another definition that is used internally in a consistent manner. Timely and accurate economic data is essential for good decision-making. Certainly, the Chinese government has more information than is published, but there are indications that it might be fragmented. It is useful to distinguish three steps that could be taken to increase data availability and transparency, namely for domestic use in China, for the recipient countries, and for the general public.

The first step that might be considered is to increase information internally for policy makers and officials in China. With the rapid increase in China's engagement in Africa and the many actors involved—both official and private entities in China—analytically meaningful information is necessary for proper decision-making, monitoring of implementation, and for measuring the effectiveness of aid operations. For example, if China's stated policy is to scale the concessionality of loans to the income level of the recipient countries, it would be necessary to measure the concessionality of all aid operations performed by the various arms in the Chinese government and development banks (including China Eximbank) in a consistent manner.

The second step might be to share more information with the recipient countries. Such information on the nature and terms of financial assistance is essential for the recipient country to incorporate the loans in the financial programming of the economy (e.g., medium-term budget planning and debt sustainability analysis). The initial cooperation agreements, which are often signed by the leaders at the highest level in the recipient countries, do not necessarily contain such information. This means that agreements are being signed without the specifics nailed down and before the relevant ministries (e.g., Ministry of Finance) can evaluate the terms of loans.

The third—and more contentious—step would be to publicize information on the size and nature of financial transactions, particularly its aid and other official financing (e.g., recipient country and sector breakdown). Such transparency would help China obtain due credit for its assistance and would reduce public speculation about its operations. It would also facilitate cooperation with other donors and financiers in Africa.

¹⁰In addition to DAC members, another 18 donors that are not members of the DAC report their ODA to the DAC, Czech Republic, Estonia, Hungary, Iceland, Israel, Korea, Kuwait, Latvia, Lichtenstein, Lithuania, Poland, Saudi Arabia, Slovak Republic, Slovenia, Taiwan, Thailand, Turkey, and United Arab Emirates.

What are possible arguments against such transparency? The Chinese authorities might fear that information on the loans provided to one country could lead to pressure for loans in other countries. Particularly as China is still a developing country, it might also create internal debate about the desirability of China's engagements abroad. It is also possible that recipient governments in Africa do not want transparency (e.g., on natural resource deals). However, the absence of official figures, inevitably invites speculation. Often, the figures that appear in the press are inflated or otherwise incorrect and might in the end be more harmful than the real information.

VI Conclusions

This paper has discussed China's role in Africa from the Chinese perspective. The increase in trade and financial relations between China and Africa and the complementary nature of their economic structures could become a significant "win-win" situation for both parties. China is clearly benefitting from both the access to natural resources and the vast market for Chinese goods. Similarly, because African economies have strengthened their own economic policies in recent years, they are now in a better situation to take advantage of this possibility. Also compared to traditional donors of Africa, China fills a vacuum by focusing on production-oriented infrastructure investment, which is a bottleneck for growth in Africa.

From a Chinese perspective, with the increase in trade and financial flows and public and private actors, the coordination task has become more complex. At a time when China is scaling up its assistance to Africa, it is appropriate for China to review the practical modalities to ensure that political, commercial, and reputational risks are taken into account. In particular, there might be a need for a better coordination among the various parts of government to ensure that the official transactions are consistent with the objectives set by the State Council.

The Chinese authorities might also consider improving the analytical content of China's own data and information on economic aid and other official financing so that there is a better basis for decision-making on allocations of financing to countries abroad. As a second step in transparency, it is also important that information be shared with relevant parties in the recipient countries at an early stage so that accurate information is available to the policy makers there. Finally, as a third step, greater transparency of data would give China due credit for its operations in Africa while reducing the harmful effects of guestimates for such operations.

Most importantly, as China is becoming a major player in Africa, an analysis of the macroeconomic impact of China's relations with Africa—the missing link-- would strengthen its operations on the continent. This might benefit from a new or different process of consultation with each country or region. Such consultation should include the impact on

the general economy, and on the health of public finances, the project planning process, and how maintenance of the projects is financed. Attention to maintenance training of projects by employing and training local labor is also very important for the sustainability of the projects. Regional discussions on infrastructure projects would also be beneficial in cases where there exists a commitment from the African side for regional cooperation. This does not mean that China should depart from its principle of no policy conditions or interference in domestic matters, but that it takes due account of economic conditions before deciding on the volume and form of external assistance to each country. Further coordination with country and international partners might also be made with respect to debt sustainability issues to ensure that the financing of projects is consistent with the fiscal and debt sustainability of a country.

This would not detract from Africa's own ultimate—and undisputed—responsibility for the growth, debt, and fiscal sustainability of their economies, along with safeguarding its natural resources and good governance.

In sum, the effectiveness of China's operations in Africa would benefit from a macro or consolidated picture of the economic impact of all transactions—at least those supported by the government sector in China.

Table 1. China: Trade with Africa¹, 2000-09 (In percent of total, unless otherwise indicated)

Flow	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
China Exports										
In millions of USD	4152	5061	6013	9017	12091	16316	22926	31870	43294	40538
In percent of total	1.7	1.9	1.9	2.1	2.0	2.1	2.4	2.6	3.0	3.4
China Imports										
In millions of USD	5413	4522	5429	8168	15041	19961	26857	34445	52884	39271
In percent of total	2.4	1.9	1.8	2.0	2.7	3.0	3.4	3.6	4.7	3.9
Memorandum Items:										
Africa Exports										
o/w to:										
Canada	1.3	1.2	1.3	2.1	0.9	1.7	2.0	2.2	2.2	2.1
France	9.3	10.6	10.2	10.1	8.7	8.0	7.3	7.1	6.8	6.9
Germany	3.8	4.1	4.5	4.3	3.2	3.2	3.2	3.3	3.1	3.7
Italy	7.2	7.6	7.1	6.7	10.3	5.9	5.8	4.9	5.3	5.1
United Kingdom	5.3	5.9	5.1	4.5	4.5	3.8	3.5	3.2	3.0	2.8
United States	18.7	16.3	14.5	17.8	19.0	23.3	23.7	23.4	22.3	18.3
<i>BRIC Countries:</i>										
Brazil	2.0	2.3	2.4	2.2	2.6	2.7	2.6	2.9	3.0	2.5
China	2.9	2.6	3.0	4.7	5.8	6.9	8.5	9.5	9.8	11.2
India	4.0	2.8	2.9	2.5	1.0	1.2	2.8	3.9	3.7	4.4
Russia	0.2	0.1	0.3	0.2	0.2	0.3	0.2	0.3	0.3	1.1
Africa Imports										
o/w to:										
Canada	1.1	1.0	1.0	0.8	0.7	2.2	0.7	0.8	0.9	0.7
France	13.8	13.4	12.1	13.1	11.4	10.3	9.1	8.5	8.1	8.9
Germany	7.6	8.0	8.4	7.7	7.3	6.7	6.2	6.0	5.8	5.4
Italy	5.4	5.4	5.5	5.4	4.8	4.7	4.5	4.6	4.5	4.7
United Kingdom	6.0	5.7	5.7	5.5	4.7	4.1	3.7	3.4	3.0	2.7
United States	7.5	7.8	7.5	6.9	6.1	6.1	6.1	6.0	5.8	5.6
<i>BRIC Countries:</i>										
Brazil	1.0	1.5	1.5	1.5	2.0	2.4	2.4	2.2	2.1	2.1
China	3.3	3.6	4.3	5.3	6.1	7.6	9.2	10.3	11.2	13.4
India	1.5	1.7	2.0	2.1	2.2	2.7	3.3	3.5	3.3	3.5
Russia	1.1	0.9	1.1	1.1	1.1	1.2	1.0	1.0	0.9	0.7

Source: IMF, Direction of Trade

1. Africa comprises Northern and Sub-Saharan Africa

Table 2: External flows from China to Africa, 2001-09

	2001	2002	2003	2004	2005	2006	2007	2008	2009
Aid to all countries									
	In millions of RMB								
China budget for ext. assistance (mill of RMB)	4711	5003	5223	6069	7470	8200	11154	12559	13000
RMB/US\$	8.3	8.3	8.3	8.3	8.2	8	7.6	7	6.8
Percentage aid to Africa	44	44	44	30	30	30	31	31	31
	In millions of US dollars								
Total	696	776	862	1046	1336	1718	2598	3649	4906
China budget for ext. assistance (mill of US\$)	568	603	629	731	911	1025	1468	1807	1903
Eximbank concessional loans (mill of US\$)	128	173	233	315	425	693	1130	1842	3003
Debt relief, mill. of US\$	450	450	450	450	450	450	450	450	450
Aid to Africa									
China budget for external assistance (mill of US\$)	250	265	277	219	273	308	455	560	590
Eximbank concessional loans (mill of US\$)	64	86	117	158	213	347	565	921	1501
Debt relief, mill. of US\$ ²⁾	375	375	375	375	375	375	375	375	375
Eximbank nonconcessional loans	4000	5100	6500	6500	7000
Memorandum item:									
China's infrastructure inv. In Africa ¹⁾	470	270	620	1340	1720	7050	4500	4500	4500

Sources: Updated based on Deborah Brautigam, *The Dragon's Gift*. Debt relief has been excluded from aid.

1. The figures for Eximbank lending are on a commitment basis, while those for aid are on a disbursement basis and therefore not strictly comparable
2. Debt relief on concessional zero-interest loans, which were previously part of the aid figures.
3. World Bank, *Building Bridges, China's Growing Role as Infrastructure Financier for Sub-Saharan Africa*.

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