CHINA-AFRICA LOAN DATABASE RESEARCH GUIDEBOOK

DEBORAH BRAUTIGAM
JYHJONG HWANG

CHINA★AFRICA
RESEARCH INITIATIVE

SAIS
JOHNS HOPKINS
SCHOOL *of* ADVANCED
INTERNATIONAL STUDIES

SAIS China-Africa Research Initiative

About the China-Africa Research Initiative

Launched in 2014, the SAIS China-Africa Research Initiative (SAIS-CARI) is based at the Johns Hopkins University School of Advanced International Studies in Washington D.C. SAIS-CARI was set up to promote evidence-based understanding of the relations between China and African countries through high quality data collection, field research, conferences, and collaboration. Our mission is to promote research, conduct evidence-based analysis, foster collaboration, and train future leaders to better understand the economic and political dimensions of China-Africa relations and their implications for human security and global development. Please visit the SAIS-CARI website for more information on our work: http://sais-cari.org/.

July 1, 2020 Updates to Research Methodology

Please note that this version of the Guidebook was otherwise last updated in July 2019.

1. Update to Chapter 3, Section 3.3

Chapter 3, section 3.3 lists the recipients of financing included in our database. While we do track Chinese loans to African private companies and multinational private companies in Africa, this data is not included in our public China-Africa loan database. Our public data only includes loans to African Governments, their state-owned enterprises (SOE), and joint-ventures (JV) or special purpose vehicles (SPV) with African government ownership.

2. Update to Chapter 7, Sections 7.10

Chapter 7, section 7.10 describes our methodology for determining whether a loan belongs in "group 2," i.e. if the loan is to a private company, and therefore excluded from our public data. Previously, we used a decision rule that states that a loan to a JV with partial ownership from an African Government or an African SOE will only be included in our public data (group 1) if the stake of the African public entity is 50% or higher (Appendix A6, code 3).

We have phased out the use of this rule, and now include loans to JVs or SPVs if there is any African government or SOE ownership, even if the stake of the African entity is less than 50%. To reflect a division of liabilities between stakeholders, we multiply the amount of the loan by the percentage ownership of the African public entity. Therefore, if a JV with 10% ownership by an African government borrows US$ 100 million from a Chinese financier, we record this as a loan of US$ 10 million. For these loans, the percentage ownership by an African public entity can be found in the "borrower" column.

3. Update to Chapter 7, Sections 7.11

Chapter 7, section 7.11 describes how the reported amount of a loan turns into the "clean" USD figure we include in our public data. We have now added a column called "applied percentage," where the reported figure is modified by a percentage, if applicable. Percentages are applied in two cases:
1. As described in update 2, if the borrower is a JV or SPV with only partial ownership by an African government or SOE, we apply this percentage to the reported amount of the loan.
2. Sometimes, official sources report that a project is being financed by Chinese financiers but will report a contract amount rather than a loan amount. If we know that the loan is going to finance a certain percentage of the project costs, we record the contract amount as the reported amount, and apply the relevant percentage. For example, China Eximbank export-buyer's credits typically finance 85% of project costs.

CONTENTS

CHAPTER 1. INTRODUCTION

The rise of Chinese engagement in Africa is both highly visible and often misunderstood. The Chinese government does not release official data on Chinese loan finance, export credits, or official development assistance on a regional or country basis. Although some projects and in-kind flows are financed as grants, the vast majority of Chinese non-equity finance in Africa takes the form of loans. The China-Africa Loan Finance Database was developed in order to build a highly reliable source of data that can be used to better understand the scope, nature, and modalities of China's loan finance.[1]

Country teams collect information about projects said to have Chinese loan finance in Africa, or commitments of lines of credit, and probe deeply to check this information to try to confirm it (or not) through multiple sources, in multiple languages. We examine borrowing government, bank, company (including SEC company filings), and press reports in both China and the borrowing country to compile a list of loans and their characteristics (interest rate, maturity, fees). We collect information on every loan, and every line of credit, tracking their status over time. Our methodology is rigorous, standardized, and systematic, and relies heavily on process tracing to track projects from initial reports to completion. We also make use of in-country contacts, and use field visits as opportunities to update and verify information on Chinese loans.

All of the researchers on this project are master's level or Ph.D. students with strong backgrounds in international development. They understand finance and foreign aid, and have experience living in Africa or China. They all speak and read more than one relevant languages. Each country team spends considerable time drawing on this background to check claims of Chinese project finance. As it relies on experienced judgment and contacts, we do not expect that our methodology can be easily replicated.

---

1. This methodology note is a revised version of the October 2013 China-Africa Loan Finance Database Methodology, which was in turn revised from previous notes dating to September 2007. The current version of this note was informed by discussions and engagement with other data collection efforts, including Dr. Kevin Gallagher and the Boston University/InterAmerican Dialogue's Chinese Finance in Latin America project, Dr. Philippa Brandt and the Lowy Institute's Chinese aid in the South Pacific, Dr. Derek Scissors and the China Investment Tracker, and AidData's TUFF (Tracking Underreported Financial Flows) methodology. We appreciate many helpful ideas from these sources.

CHAPTER 2. BACKGROUND READING AND RESEARCH ESSENTIALS

Before they begin to work on this project, researchers need to become familiar with the Chinese system of overseas development finance by reading these required background readings:

- Deborah Brautigam. 2011. The Dragon's Gift: The Real Story of China in Africa (Oxford University Press, revised paperback edition), chapters 4-6 are required.

- Deborah Brautigam. 2011. "Aid 'With Chinese Characteristics:' Chinese Foreign Aid and Development Finance Meet the OECD-DAC Aid Regime." *Journal of International Development* 23 (5).

- The People's Republic of China, Information Office of the State Council. 2014, "White Paper on Foreign Aid," http://english.gov.cn/archive/white_paper/2014/08/23/content_281474982986592.htm.

- Deborah Brautigam and Kevin Gallagher. 2014. "Bartering Globalization: China's Commodity-backed Finance in Africa and Latin America," *Global Policy* 5 (3).

Each researcher should have the following tools before conducting database research:

- ☐ Personal laptop[2]

- ☐ Chinese input system installed[3]

- ☐ Internet access

- ☐ MS Excel or Excel compatible programs

- ☐ A printed version of this manual. An e-version is also available.

- ☐ Patience

---

2. While you can borrow laptops from the library or use the library computer, you will not have the administrator rights to install the Chinese input-system.

3. Unless you have no Chinese proficiency and are hired based on other language skills, such as Arabic, in which case you need to have Arabic input system/keyboard installed.

CHAPTER 3. WHAT ARE CHINESE LOANS TO AFRICA?

While ostensibly straightforward, there is great nuance in what qualifies as a Chinese loan in Africa. The best way to understand this is to breakdown this description into its components:

3.1 Chinese

This database includes all mainland Chinese loans to Africa, which may come from a variety of sources, including:

- Chinese Ministry of Commerce (MOFCOM)

- The two Chinese policy banks— Export-Import Bank of China (Eximbank) and China Development Bank (CDB)

- Chinese private/commercial banks—Industrial and Commercial Bank of China (ICBC), China Construction Bank (CCB), Bank of China (BoC), China CITIC, Agricultural Bank of China (ABC), China Merchant Bank (CMB), etc.

- Chinese state-owned enterprises (SOEs) or private businesses providing suppliers credits or investment loan financing

- People's Bank of China - the central bank of China, who is a relatively new lender in Africa comparing to the Chinese policy banks

3.2 Loans

A list of loan types can be found in the appendices. We identify a variety of loans. When the type of loan is unknown, simply identify it as "Loan."

- Commercial loan (CommL)—loans with terms that are comparable to market rate, or loans identified by a reliable source as "commercial."

- Zero-interest loan (ZIL)—loans with no interest. Only offered by MOFCOM. ZILs are usually accompanied by a small grant and it may take some work to separate them. These ZIL+Grant modules are always accompanied by a MOFCOM "Economic and Technical Cooperation Agreement", 经济技术合作协议. ZILs are always denominated in CNY when they are lent out, so anytime you see

these being denominated in other currencies (US$, XOF, etc.), know that it has been converted from CNY.

- Concessional Loan (CL)—the proprietary term 优惠贷款 that refers to a specific loan instrument that is only offered by the Eximbank. Generally at 2% with 5-year grace period and 15-year repayment period.[4] CLs are usually denominated in CNY by default. Does not require the borrower to pay part of the project cost up front.

- Export Buyers' Credit (EBC)—Offered by Chinese banks to African governments to buy goods and services from Chinese suppliers or contractors. Not to be confused with Export Seller's Credit 出口卖方信贷, which is not a loan to Africa.[5]

- Preferential Export Buyers' Credit (PEBC)—the proprietary term 优惠出口买方贷款 that refers to subsidized export buyers' credit that is only offered by the Eximbank, with a fixed interest rate on more generous terms than the market rate. Quite similar to Concessional Loan, but denominated in USD, not CNY. Will usually only finance up to 85% of the project cost; the borrower has to provide at least 15% up front.

- Suppliers' Credit (SC)—Loan financing offered by Chinese companies to buyers of their goods or services. Usually short to medium term. Suppliers' Credit may originate from the companies' own financing, or from Eximbank's Export Seller's Credit.[6]

- Master Facility Loan (MFL): These are rare. The amount for a master facility loan is usually quite large, the facility is usually resource-backed, and is drawn down over several years to finance individual projects (MFL-sub) within the agreed sector. Terms of MFLs vary. These loans are almost always at commercial rates based on LIBOR (London Interbank Offered Rate) and are not subsidized.

---

4. There are several terms the media likes to use, such as "soft loan" or "preferential loan" etc. This does not prove that the loan is a Concessional Loan, only that it is a loan with terms lower than market rate.

5. Export Seller's Credit is financing offered by the Eximbank to Chinese companies who wish to do projects abroad. The Chinese companies may then decide to use this money either as equity financing (investment) or loan financing (aka suppliers' credit) abroad. The Chinese companies are responsible for repaying the Seller's Credit to Eximbank. We are only interested in a Seller's Credit when it is used as loan financing, in which case we would call it a Suppliers' Credit.

6. See footnote 5.

3.3 To Africa

Recipients of the financing could include:

- African governments

- African state-owned banks

- African state-owned enterprises (SOEs)

- African private companies

- African regional banks—Banque Ouest Africaine, Central African Development Bank, etc.

- Other companies registered in Africa, including Chinese-owned firms and firms from third countries. For example, a Chinese company can borrow in China for its project in Africa. A Singaporean company can also do this. We would track these.

3.4 What are NOT Chinese Loans in Africa:
Framework Agreement and Memorandum of Understanding

Policy bank and MOFCOM loans will always have a framework agreement that identifies the terms. Framework agreements are not signed loans. The loan agreement is separate (see Figure 1 below). However, sometimes a framework agreement refers to an umbrella agreement that may eventually finance many projects, i.e. a line of credit up to US$1 billion or US$2 billion (see Section 3.2). We track this under "Comments" but we do not consider these framework agreements to be loans. Only the individual loans signed under the agreement become loans in our data, and we designate them as LoC-sub (see Section 7.1). CDB also has umbrella agreements called Master Facility Agreements (MFL), and individual loan disbursements under the MFL are called MFL-sub. Similar to Eximbank Framework Agreements, MFLs itself do not count towards our clean loan data, only verified MFL-subs disbursed under it.

Memorandum of Understanding (MOU) are preliminary agreements on "further negotiations" on a particular transaction. An African government and a Chinese policy bank can sign an MOU on a loan, which means that they have not flushed out the details of final agreement yet, but have a general idea of what the loan size will be and what it will be used for. An African government can also sign an MOU on a a service/purchase contract with a company, but the deal is not yet finalized.

Figure 1. China Eximbank Loan Cycle
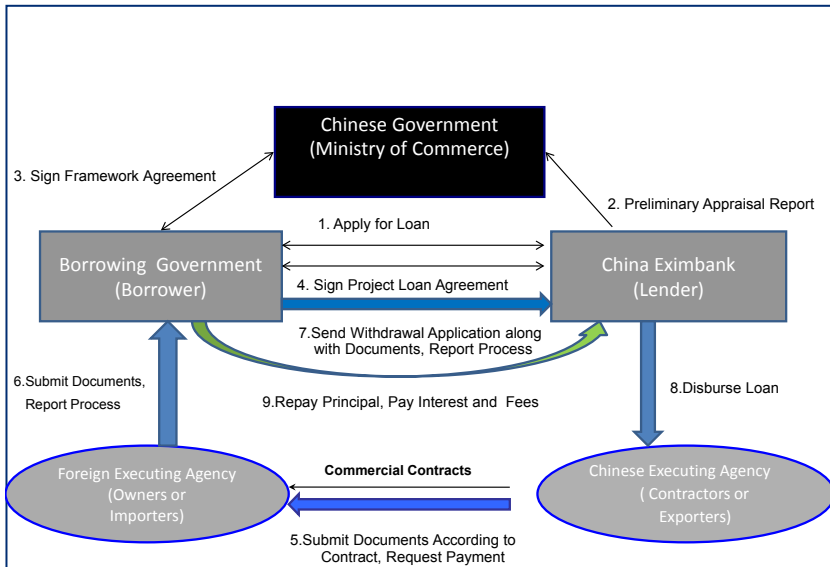
Source: China Eximbank website (2009). Translation by Zu Yiming and Deborah Brautigam.

CHAPTER 4. IDENTIFYING PROJECTS AND LOCS

We begin on a country basis each year with a systematic review of online sources, both open and proprietary. In addition to the Google Alerts that are automatically delivered (consult supervisor for membership access). The following sources should all be used, though not necessarily in the order below:

- ☐ Lexis-Nexis (via JHU library)[7]
- ☐ Use "Advanced Options" dropdown menu under the search field to set search result time range.
- ☐ Access World News (via JHU library)[8]
- ☐ You may select Africa for your "World Region" before conducting the search.
- ☐ AllAfrica (consult supervisor for membership access)[9]
- ☐ Google Alert (consult supervisor for membership access)
- ☐ Google searches

In all the sources above, the following key words should be used as the basis of your research. Make sure the Google Alerts have the following keywords set up.

- ☐ China/Chinese/Beijing
- ☐ African country name/Capital name
- ☐ Loan, credit, aid, finance, borrow, "framework agreement," "memorandum of understanding," "谅解备忘录," MOU, package, assistance

Use the above keywords to collect an initial list of all possible loans, limiting the search to the relevant calendar year. The entire initial search process should be repeated using English, Chinese (simplified), and if relevant, a third language (French, Portuguese, Arabic). Researchers can also consider China AidData as a source for project identification, although not for project verification. In this initial phase, we cast a wide net and include all projects with even a tangential mention of loan financing, framework agreement, or memorandums of understanding (MOU), even if it is still under discussion or has been abandoned.

---

7. Access LexisNexis via databases.library.jhu.edu/databases/alphabetical?alpha=L

8. Access AccessWorldnews via databases.library.jhu.edu/databases/alphabetical?alpha=A

9. Access AllAfrica via allafrica.com/

Most databases allow you to search words with variations (China vs Chinese, Angola/Luanda, etc.) For searches in Google, use the search operation OR between keywords. For example, to search for the keywords "China" or "Chinese" or "Beijing" and "Zimbabwe" and "loan," you will enter into Google search field:

"China" OR "Chinese" OR "Beijing" Zimbabwe loan

Major databases usually have Advanced search options for you to tailor your search. For searches on AllAfrica, which does not have an advanced search option, use Google site search instead. For example, to replicate the aforementioned search terms, but only on AllAfrica, enter into the Google search field:

"China" OR "Chinese" OR "Beijing" Zimbabwe loan site:allafrica.com

Read more on Google site search in section 6.1.

JHU students have access to Lexis-Nexis and Access World News through the library. JHU library also has access to all articles published by the news aggregator Africa Intelligence, including West Africa Newsletter, The Indian Ocean Newsletter, Maghreb Confidential, Africa Energy Intelligence, and Africa Mining Intelligence. CARI has an AllAfrica subscription. Contact your supervisor if you need to use this.

The CARI Master Database email has set up Google Alerts to receive updates. The Google alert is set up to receive anything with the words "China," "Africa," "loans," and "finance," in six different languages: English, French, Portuguese, Afrikaans, Arabic, and Swahili. You can add more alerts as you see fit at https://www.google.com/alerts# after you have logged into this account. Gmail now allows you to access multiple Gmail accounts, so you do not have to sign out of your own personal account while accessing this. After you have processed the information in an Alert, tag it as Checked so other RAs will not have to check it again.

CHAPTER 5. PROJECT CONFIRMATION: WHAT TO LOOK FOR

Once we identify a (potential) loan or project, country teams will enter it into their country database, assign a case number, and attempt to verify the most recent status of the project. These verification searches involve tracing the process of the project (or projects in the case of a line of credit). Each piece of information has a relevant location in the database spreadsheet (see Chapter 7). You may not be able to verify all of the information below, but give it your best. Here is a checklist of all the 13 pieces of information you need, and you should follow it rigorously when you do your research (also in Appendix B).

- ☐ Status
- ☐ Year
- ☐ Country
- ☐ Financier and borrower
- ☐ Finance type
- ☐ Reported financing amount
- ☐ Financing terms
- ☐ Purpose
- ☐ Sector/sub-sector
- ☐ Contractor
- ☐ Resource security
- ☐ Comments
- ☐ Source

All projects, even those with TBD or Unconfirmed status, need to have at least Status, Year, Finance Type, and Country filled out in order for the built-in Excel formulas to work. Only fill in the columns with verified information. If you are unsure of the validity of the information, put it in Comments and describe why the information may not be reliable and thus not fit to be put into the columns.

5.1 Status (required)

Our methodology allows for continuous and regular updating of the data for each country. We monitor the status of projects, moving them from "Unconfirmed" (this includes projects with only a memorandum of understanding or MOU) into "Signed", "Implementation", and

"Completion" as we have information. Unless we have firm evidence that a binding legal commitment exists, i.e., that an actual loan has been signed, we do not include a project in our public loan totals as a commitment of Chinese finance. We continue to track these confirmed commitments for project implementation and project completion.

The "Status" column encompasses the status of CARI's research, the loan status, and the project status. "TBD" refers to loans that CARI researchers have identified but have not had the time to verify yet. This should be a temporary status and reassigned to something else as soon as possible. "Unconfirmed" and "Signed" both refer to the status of a loan, while "Implementation" and "Completion" refer to the status of a project. "Inactive" refers to loans that had had the status of "Unconfirmed" for more than 5 years, as well as loans that has the status of "Signed" for more than 5 years without indication of moving into "Implementation."

These rules for assigning Status can still apply to loans or projects even if a project later reveals itself to be not a Chinese loan to Africa (either because it is not from a China lender, not a loan, or not to an African borrower). For Example, if project in Africa that we initially thought to be Eximbank loan financed ends up being financed by a loan from the Arab Fund, we would record in the Comments column that this new information has reliably updated our understanding of the financing source from Chinese to Arab, then we would change the Financier column from Eximbank to "NotChina: Arab Fund". The Status can remain "Signed" or "Implementation" or "Completed"; the "NotChina" clause the in Financier column would insure that whatever amount the Arab Fund gave would not be included in our Chinese-loans-to-Africa figure.

See Appendix A1 for a list of Statuses we use and their explanation. Some keywords to consider when tracking down loan/project status are: signing, agreement, ground-breaking ceremony, cornerstone, handover ceremony, ribbon cutting, construction, etc. For very large Eximbank loans, you can add Li Ruogu and Hu Xiaolian, the former and current chairperson of Eximbank. Large and high profile loans will usually be signed by them in person instead of delegated to someone at the Chinese embassy or the vice chairpersons.

5.2 Year (required)

For projects with the Status of <u>Unconfirmed</u>, <u>Canceled: loan</u>, and <u>Canceled: Finance</u>, record the year the project was last reported to have new activity. This may be a media report. However, a re-posting of old news at a more recent date does not count.

For projects that have the Status Signed, Implementation, and Completed, find out the date the loan was signed.

For TBD projects, record the publication date of the source where you first identified the project.

For MFA-sub and LoC-sub projects, if they were named at the signing of the original LoC, use the signing date of the Framework or Facility Agreement. If the sub-project was not mentioned at the signing, record the date the MFA-sub or LoC-sub went into Implementation.

5.3 Country (required)

Record the African country that received the loan. For loans that went to regional banks, record it as Regional. For the occasional projects that are trans-boundary with the costs split between the two countries, find out how the costs were split, and record each country's portion as an individual project. If a trans-boundary loan cannot be further broken down into individual countries due to lack of information, flag for supervisors. Usually what happens in this case is we will put the entire amount under one country (usually the country with the larger GDP because they are likely to borrow more). Then we will create parallel case (with its own unique ID) with the same loan amount under the other country with the status of "Duplicate". We then specify under the Comments column in this duplicate case that detailed information is located in the other country's information, with the exact ID provided for easy reference.

5.4 Financier and Borrower

Though in Chapter 3 we listed all the possible sources of Chinese loans, we need to find out who the financier is even if it is not Chinese. When we identify the project per instructions in Chapter 4, a project comes up on our radar because we have reason to suspect it to be a Chinese loan to Africa. Since the burden of proof is on us, we put in research time to either confirm or discount it. We want to record why we discounted a project so that neither you nor another researcher need to repeat the process of discounting it when you come across the same project again.

For Unconfirmed financing, it is not uncommon to have difficulty identifying the financier because it may be simply an unsubstantiated rumor about "China." Since the case is Unconfirmed, you always have the option to leave the Financier column blank, and instead put in the Comments column any rumored and unverified information.

Borrower is usually the African government, in which case if it is a

government-to-government sovereign loan, the loan would be signed by the local Minister of Finance. Occasionally, the borrower will be an African SOE or private business, which you should note down. See Appendix A2 and A3 for a list of Financiers/Borrowers and their explanation.

5.5 Type of Finance (Required)

Even if the lender is not Chinese, you can still record the type of finance. See Appendix A4 for a complete list of financial instruments that includes both loans and non-loans.

5.6 Reported Financing Amount

Chinese loans are only denominated in CNY, USD, or EUR. Record the original reported amount in millions and the currency it was reported in. Sometimes several sources may provide similar amounts but converted into different currencies, in which case we use the amounts and currencies from the most reliable source (see Chapter 6). If a single (reliable source) provides two or more figures with different currencies, always use the CNY figure first. If there is no CNY figure, use the USD figure first.

We want to retain the original reported currency because sometimes the currency that the loan is denominated in can give clues to the type of finance. For example, CL and ZIL are always denominated in CNY, while commercial loans are usually denominated in USD.

5.7 Financing Terms

There are four components to the terms of a loan: the interest rate, the grace period, the repayment period, and the total term/maturity/tenore. Grace period is the duration of time between the signing of the loan (or sometimes the first disbursement of the loan) and the first repayment of principal. No repayment is required during the grace period. Once the grace period is over, repayment begins. Usually Eximbank CL will have a 5-year grace period, after which the loan will be repaid over 15 years. This results in a 20-year term, which includes the grace period and refers to the entire time the loan is active.

5.8 Purpose

Purpose should include the name of the project, the location of the project, and the phase of the project, and the loan tranche if applicable. Put the most common spelling of the project name here, and leave the alternative spellings in the Comments. Other details are necessary for specific types of projects if available:

- Roads and railways: length in kilometers, begin and end location, intermediate towns it passes through. E.g. "Thies-Touba Highway, 113km".

- Power plant: location, type of power generation method. Record the MW by the number of turbine or engine units if possible. For example, "Hamrawein B coal power plant Phase II 2x1000(2000MW)" has two turbines, each generating 1000MWs, and the plant itself generates 2000MW.

- Power transmission lines: length in kilometers, begin and end location, names of towns or number of households it supplies, voltage, power plants where the power comes from.

- Social housing: number of housing units. E.g. "Kansonyah Social Housing - 5000 units"

5.9 Sector and Sub-Sector

Refer to tab "Codes" to enter the correct sector code. Sub-sector codes are currently incomplete and only cover those of Energy, Transportation, and Other Social, since these are the only sectors with enough projects to warrant finer categories.

Sector code 43 Multi-sector should only be used for projects with multiple but identifiable sectors. For example, the "Africa Port Project- rail, road, and special economic zone" would be assigned Multi-sector. However, "Economic and Technical Cooperation Agreement" (see Chapter 3 for ZIL) should be assigned Unallocated until we have information on what projects were involved.

Since "infrastructure" can include several sectors, LoCs (and MFLs) for infrastructure should be considered Unallocated. Specific LoC-subs that have been identified would take on their own relevant sector.

LoC for specific sectors such as an agricultural LoC can be assigned 31 Agriculture. Within a sector-specific LoC, individual LoC-subs do not have to have the same sector assignment; an LoC classified as Agriculture may very well have LoC-subs that finance small diesel generators for irrigation, or roads to connect to nearby markets, which would be assigned 23 Energy and 21 Transport.

5.10 Contractor

The names of the Chinese contractors or suppliers involved with the project. Some projects have more than one Chinese contractor, or have one major Chinese contractor and several smaller Chinese subcontractors.[10]

Be specific about contractors. For example, do not record Sinomach (国机械工业集团) as a contractor. Sinomach is a conglomerate with subsidiary companies in almost every sector. Specify the name of the companies. See tab "Co." for a list of common Chinese contractors. Use the Company name instead of the parent company name if possible.

5.11 Resource Security

We are interested in tracking all loans that are secured by an escrow arrangement involving an export (Ghana's Bui dam was secured with cocoa exports, for example) or a production off-take arrangement (electricity sales also helped secure the Bui Dam loan).

Common resources used for resource security are: minerals such as oil, copper, iron, diamond, platinum, etc., as well as major commodities such as coca and sesame. Ideally, find out the exact amount of resources involved, such as barrels per day (bpd) for oil, and tonnage for minerals.

5.12 Comments

The Comments section is a critical part of our process tracing methodology. It should follow a standard format in three paragraphs. These three paragraphs could be as brief as four sentences or they can be longer. Each researcher should add his or her initials and date when adding to the comments section. E.g. (JH, 23-Sep-2015).

---

10. FYI, CMEC (China Machinery Engineering Corporation,中国机械设备工程股份有限公司, subsidiary of Sinomach) was known as the CMIC China National Machinery & Equipment Import & Export Corporation (中国机械设备进出口总公司) before December 2007. Do not confuse CMEC/CMIC with 1) CAMCE, (中工国际工程股份有限公司, China CAMC Engineering Co., subsidiary of Sinomach), nor with 2) CMC (China National Machinery Import and Export Corporation, 中国机械进出口（集团）有限公司, 中机公司, subsidiary of China General Technology 中国通用技术) .

1. Overall Description. The first paragraph should summarize the date the loan was signed, location, total project cost, terms of loan, etc. Nigeria's Abuja Light Rail Project is our example here. "(DB 1-Jan-2015) On September 12, 2012, Nigeria's Minister of Finance, Ngozi Okongo-Iweala reported on the MOF website that her government had signed an agreement with China Eximbank to provide a US$500 million loan at 2.5% interest with a 20-year term and 7-year grace period, to finance Sections 1A and 3 of the Abuja light rail project. The project will include construction of new flyovers, bridges and underpasses, increasing the overall work from 60.67 km to 77.78 km. (JH 1-Aug-2015) In 2014, Okongo-Iweala reported that the project's overall cost was expected to reach US$849 million."

2. Actors Involved. The second paragraph should elaborate on the actors involved: "(DB 1-Jan-2015) CCECC obtained a contract to carry out the work in 2012 for the Nigerian Federal Capital Territory Administration (FCTA) and the Nigerian federal government." Other relevant players to be recorded include the loan insurer (usually Sinosure), sub-contractors, local contractors, and designated export companies if resource security is involved.

3. Current Status and Relevant Information. The third paragraph should report on the current status and relevant information as of the date checked: "[DB 1-Jan-2015] The project initially commenced in 2006. The foundation stone was laid in 2007. [JH 1-Aug-2015] It was only started in earnest in 2009 due to an initial lack of funds. Before securing the loan, FCTA and the federal government had spent about NGN22bn (US$139 million) of their own funds completing 20% of the project." Other relevant information for this section may include: other funders that have supported the project or at some point were interested in supporting the project, alleged scandals, conflicts of interest, conflicts between different contractors in acquiring projects or project financing, alternative spellings of place/project names, etc.

The research manager will be responsible for editing and revising the comments for all projects over US$100 million, to ensure that old and irrelevant or erroneous data is deleted and the comments are consistent and up to date.

5.13 Source

When you find a website that is relevant to your research, copy down the URL and save a copy of the webpage as a PDF right away. Many Chinese government and contractor webpages disappear quickly, so we want to have an electronic copy of it. Save the webpage in whatever language it was originally displayed in, and save another file for a Google Translated version of the webpage if necessary, such as if the original webpage was in less accessible languages (Arabic, Amharic, Swahili, etc.)

Every source in the Comments section should have a PDF file scan saved into JH Box.[11] The PDF file names should follow a specific format of Project ID, Project Purpose, Source Name, and PDF index. Since each project often has many PDFs, we index them to keep track of how many different PDFs we have for each project. For example: "CD.006.19_ EasternButangboRoad_3_SASAC2" indicates it as the third source PDF for the Eastern Butangbo Road project, with Project ID CD.006.19, from SASAC. Since this project uses two different SASAC links, this one is further indexed SASAC2. We need at least three reliable sources for each "clean" project.

---

11. All JHU students have access to JHBox, which is similar to Dropbox but does not have a size limit. You will be given access when you join our research team.

CHAPTER 6. PROJECT CONFIRMATION: WHERE TO LOOK FOR IT

Now that we know what kind of information you need to find, where can you find it? Here is a list of sources you should check to verify a loan, by order of reliability as well as the likelihood of yielding information. See Appendix E for this checklist and use it thoroughly when you do your research. You may not need to check all 13 sources to confirm a financing (some sources are only relevant to particular types of financing/projects), but you cannot call a loan Unconfirmed unless you have checked all the sources. Each line of financing should have at least three sources. You may need to search several times using different combinations of China, Chinese, loan, project name, country name, etc. in several languages in each source. When using Google for searching you will often have to navigate through at least six pages of Google results to find something useful. We have sometimes found a useful piece of information after fifteen pages of results or even more. Be sure to also search for Google images of the project construction. This can be very helpful for confirming implementation.

6.1 Chinese Government Sources

Check the MOFCOM and Chinese embassy websites in the host country (in Chinese and the local language). Although MOFCOM is generally reliable, they sometimes repost articles without checking them. Check the CDB and China Eximbank websites, particularly their press releases. For zero-interest loan projects, check the MOFCOM tender announcements (zhaobiao 招标– see link in Appendix C).

Most other Chinese government sources can be found by a Google site search "site: gov.cn". For example, to search for results on Chinese government websites regarding Bui Dam, you would type "Bui Dam site: gov.cn" into the Google field. Occasionally provincial governments may have information on their provincial contractors' work abroad.

There are two Chinese government sources that are exceptions to using the .gov.cn URL: Chinese embassies and the Forum on China-Africa Cooperation (FOCAC). These two have .org as their extension. Use the Links tab in the database to locate the URL for Chinese embassy; they can also be found on Google easily. So search on FOCAC, use "site:focac.org".

Beyond direct government sources, Chinese state-owned media outlets

are another good source, including People's Daily, China Daily, CCTV, and Xinhua. Beware that even state-owned media are in the habit of reposting articles of other media sources without fact-checking, so be discerning when using their information. We consider original reporting by Chinese reporters to be fairly reliable, but not information that was first reported or announced by an African source and is being repeated by Xinhua, for example. Read carefully.

6.2 African Government Sources

Many African governments have government websites. The quickest way to search for African government information is to use a Google site search, such as "site:gov.et" or "site:go.ke." You can find the country-specific extensions, along with relevant country-specific government websites, in the Links tab of the database.

While top-level domains exist for most countries, not all SSA countries have unique domains for their government websites. For example, the Chadian Ministry of Health has the URL "www.sante-tchad.org," and the official Gabon government webpage has the URL "www.en.legabon.org." So, if your "site:" attempts didn't turn up any government sources, check first if the relevant country's government actually uses their respective top-level domain. For countries that do not use their top-level domain, it is possible that they do not yet have the capacity to maintain their own website, and your next best chance may be to see if these government agencies maintain a regularly updated Facebook page or even Twitter accounts.

Since not all African government agencies have the same URL extension, you may need to track down the website of the agencies independently. Common places to check are the local ministry of finance, the central bank, debt management agencies, the relevant state-owned enterprises (national power companies for energy projects; national telecom companies for telecom projects), the president's office (sometimes this is the only website available for the country), ministry of communication & ICT, and parliamentary debate records (Hansard, aka the transcripts of Parliamentary Debates in Britain and many Commonwealth countries.) In many countries, loans have to be ratified by the parliament and information will be published in the official government gazette (see Kenyalaw.org, for example). Many gazettes can be found on the US Library of Congress website: https://www.loc.gov/law/help/guide/nations.php#M. You should also check the relevant ministries based on the project sector. For a railway project, see if the country has a railway authority or state-owned company; for agricultural projects, check out

the ministry of agriculture, etc.

Keep in mind that local politicians have incentives to suggest that their projects are Chinese-financed even at a very early stage of the financing discussion when nothing has been confirmed; holding a press conference to declare that they have obtained external financing can be good for garnering political support, particularly during election years. Make sure to verify their claims with other reliable sources, preferably details of the loan signing rather than an MOU.

Finally, African governments also have their own state-owned media. You will have to Google something along the lines of "state media of X country" to figure out what they are, since they do not always use the same URL extension as their governments. Another way is to consult the Wikipedia pages of "Media of X country" to get a preliminary idea of what media sources are available, and then to track down the government sources.

6.3 Chinese Contractors, Sub-contractors, and Suppliers

Most Chinese loans will be provided for a project implemented by a Chinese firm. Has a company been identified? Is the project listed on their website (note that large Chinese companies often have multiple subsidiaries and each might have its own website)? Has that company made any filings with the Securities and Exchange Commission that mention the project? Does it list on a stock exchange in Hong Kong or another location that requires disclosures?

Make sure you check both the English and Chinese version of their websites; often the Chinese version has more (and more correct) information than the English version.

Keep in mind the numbers reported by contractors are usually the contract value, not the loan value. For buyers' credits, the loan will usually only finance 85% of the contract value. Also, contractors have an incentive to insinuate that their projects are going to be financed by the Chinese government, but researchers must take these statements with a grain of salt. Chinese contractors can promise the African government that they might get funding if they receive the contract in order to make their tender more competitive, but that does not mean Eximbank or CDB will agree when the borrowing government actually approaches them to request financing (see Chapter 5 "Orient Express: How Does Chinese Aid and Engagement Work?" in The Dragon's Gift). Remember, contractors cannot sign for government loans--governments sign for government

loans.

6.4 Company Filings and Bond Prospectus at Security Exchanges

Companies (private or SOE) that wish to be traded publicly and governments that wish to issue bonds that are traded publicly, need to submit either company filings (the former) or bond prospectuses (the latter) to the relevant agencies. Chinese companies often have company filings at the Hong Kong Stock Exchange, while African governments must submit their bond prospectus to either the U.S. Securities and Exchange Commission (SEC), the European Securities and Markets Authority (ESMA), the Irish Stock Exchange (ISE), or other similar agencies who manage the market in which they wish their bonds to be traded. A new bond prospectus must be submitted every time new bonds are issued, so a country may have several iterations of prospectuses.

Why are we interested in company filings and government bond prospectuses? These two documents serve a similar purpose of disclosing their company/government's financing profile. From the company filings we can often learn what projects they are undertaking abroad, what the status of each project is, and perhaps how they are financed. From the bond prospectus we can often learn an African country's external debt profiles (which foreign governments do they owe money to?), as well as which major projects are financed by external debt and how much debt there is. These are legal documents and are considered to be very reliable sources.

6.5 Private Media Outlets

This includes Western media such as Reuters, AP, Bloomberg, as well as any non-government owned Chinese and African media outlets. AllAfrica is a news aggregator that will include both African government media articles and private media articles. Most of these can be found via Google, LexisNexis, and Access World News.

Online newspapers in many countries may not be picked up by LexisNexis or Google, so it is better to consult the Wikipedia page of "Media in X country" first, find a list of local media outlets, then go directly to their website. It is difficult to know which are the "best" online sources, as they vary sharply in credibility. Here is one list of top-ranked online media in Africa: www.africapedia.com/TOP-50-NEWSPAPERS-IN-AFRICA-BASED-ON-WEB-RANKINGS

These local newspapers are not highly reliable but can help confirm

whether a project has been completed, as there will almost always be a ceremony to mark the "handing over" of the project. China's official media can be more reliable as they have to answer to their government, but as noted above, they sometimes simply reprint stories from the international press without checking. The media may also have photos of the construction.

As a rule, reporting that involves interviews with actual people, construction site visits, and event coverage are generally more reliable than op-ed reports or reports done without reporters having to step away from their computers.

There are also sector specific media outlets and business news outlets that may be useful. See Appendix E for examples.

6.6 Other Possibilities

Other sources you should also check are IMF's Article IV country reports, which are published every couple of years for most countries. These reports sometimes have information on the country's external debts for specific projects. While not always accurate (sometimes they too rely on media reports), this is often a good source. The World Bank may also mention Chinese projects in its country reports. Use a Google site search to mine these two websites.

CHAPTER 7. HOW TO OPERATE THE DATABASE

Now that you have found the information needed, this chapter shows you how to enter the information into your country section of the database. The number of columns in the database roughly matches the information you are required to collect as detailed in Chapter 5. You do not need to fill out all the columns, since roughly half of the columns are formula-based and will automatically update as long as you fill out the other hard-coded columns correctly. Keep in mind that for many of these hard-coded columns, there is only a limited range of inputs, as described below. Formula-based columns are indicated in row 1 in grey; do not type in these as they will update automatically based on hard-coded columns.

Every project will have a "last checked by" date. For projects with the status "Unconfirmed," researchers should re-examine the status each year.

7.1 Project ID (hard-coded[12])

Projects IDs are unique identifying codes for each project. If you find a new project, you will need to generate a new ID. The ID format for a regular project is as follows:

CG	.004
Country ISO code	A number originally assigned to projects within the same country

Thus, CG.004 is the fourth known project in the Republic of Congo since 1990. However, as we continue to find new information on a project, the project's Year may change. Thus, do not treat the ".004" as an indicator of the age of a project. For a list of country ISO codes, see Appendix A8.

When assigning IDs to new projects, sort the data by Year first, and then by Country. This way you can easily see the highest ID index number in the country and assign the correct ID index number next in line. Make sure you have removed all filters before sorting by Project-ID column.

For projects that have several phases, or loans that have several tranches of disbursement, each phase and each tranche will receive an independent Project-ID. Be sure to give the projects the same name (with phases or tranches identified) so it is easy to identify them by browsing

---

12. Hard code means cells with the figures entered manually. The figure will remain there unchanged until you manually edit it.

and to calculate the total amount (this total should also be in the project comments).

No ID is to be deleted; even if it is a duplicate of another project, do not delete it. Simply reassign the Status.

The format of lines of credit and master facilities are as follow:

GQ	004	.01
Country ISO code	A number originally assigned to projects within the same country	.1 denotes original LoC/Multi-phase projects. Subsequent withdrawals from this account, are denoted .2, .3, etc., usually by order of year.

Projects that are funded from the same credit line or master facility would carry an additional digit in their ID. In Example 2 below, GQ.004.01 is a line of credit worth US$2 billion, which is drawn down in 2006 and 2007 to be used for the individual projects of CG.004.02, CG.004.03, etc. In this example, only about half of the line of credit has been drawn down, and CG.004.01 still has about US$1 billion left. The original line of credit CG.004.01 has the acronym of LoC, and the individual sub-projects funded out of it are called LoC-sub.

Figure 2. Sample database screenshot

	A	B	C	D	E	K	L	M	N O	P	Q	R	S
		sub code (do not change e)	St at us Co de	Project Status (do not change this column; change Status Code instead	Year	Financier	Cr ed it co de	Type of Finance (do not change, change Credit Code only)	B or de r Ca se	Gr ou p	Rprt'd Amount (million)	Rprt' d Unit	USD Equiv.	Clean USD (millions) (do not change
1														
2	110024													
456	GQ.001		4	Completed	2001	Mofcom	3	ZIL	1		11	USD	11	11
457	GQ.002		4	Completed	2002	Mofcom	3	ZIL	1		6.25	USD	6	6
458	GQ.003		1	NoCheck: <2	2003	Mofcom	3	ZIL	1		6	USD	6	6
459	GQ.004.01	GQ.004	3	Implementat	2005	Eximbank	9	LOC	1		2000	USD	2000	1022
460	GQ.009		9	Duplicate	2005				1		1060	EUR	1318	
461	GQ.013		3	Implementat	2005	NotChina:	25	StateBudget	1					
462	GQ.018		9	Duplicate	2005	Mofcom	3	ZIL	1					
463	GQ.004.02	GQ.004	4	Completed	2006	Eximbank	10	LOC-sub	1		257	USD	257	257
464	GQ.004.03	GQ.004	11	Inactive	2007	Eximbank	10	LOC-sub	1		380	USD	380	
465	GQ.004.04	GQ.004	4	Completed	2007	Eximbank	10	LOC-sub	1		300	USD	300	300
466	GQ.004.05	GQ.004	11	Inactive	2007	Eximbank	10	LOC-sub	1		300	EUR	411	
467	GQ.004.06	GQ.004	3	Implementat	2007	Eximbank	10	LOC-sub	1		421.2	USD	421	421
468	GQ.014		9	Duplicate	2007				1		60	USD	60	
469	GQ.015		9	Duplicate	2007				1		300	EUR	411	

Source: Johns Hopkins China-Africa Research Initiative

Correctly coded Project-ID, along with correctly assigned Finance Type, will allow the built-in Excel formulas to deduct the amount of the individual sub-LoC from the original line of credit automatically without double-counting.

Projects within the same line of credit do not have to be located next to each other. In Example 2, GQ.004.1 is a 2008 Line of Credit that totals US$2 billion. In 2006 and 2007, US$257 million, US$300 million, and US$421 million are drawn down so the left over amount from this line of credit is US$1022 million. It is fine to have other projects in between them; the formula will work regardless of how you sort them, in this case, the sheet is sorted by year. Notice that the amount for GQ.003.03 and GQ.004.05 are not included, because their Project Status is Inactive (explained below).

7.2 Sub-Code (formula[13])

This column only exists for Excel to recognize projects from the same lines of credit and calculate the total amount accordingly. Do not edit this column. Simply copy an existing cell above and paste it in and Excel will automatically adjust the formula to reflect the new row of numbers.

7.3 Status Code (restricted hard code[14]) and Project Status (formula)

Do not change the Status column, which has built-in formulas; copy and paste existing cells for the formula. Enter the Status Code manually ("hard code") into the Status Code column and the Projects Status column will update automatically. To see the complete list of statuses and what each status means, see Appendix A1.

Project Status reflects both the status of the project as well as the status of finance. Even if a project reveals itself to be not a Chinese loan to Africa (either because it is not from China, not a loan, or not to Africa), we would still fill in the Status. For example, if an African project ends up being financed by an Arab Fund loan, the Status for this entry would be "Nocheck:delete." This insures that we know why we discounted this project in the future without having to do the research again.

---

13. This indicates cells are formula-based and will update automatically.

14. This indicates cells are hard-coded, but will only accept certain inputs in order for other cells that rely on it to calculate correctly.

7.4 Year (hard code)

See Section 5.2 on what constitutes Year. All projects/loans need a Year entered, and this column should only contain a 4-digit year number (no symbols, letters, etc.). Other columns are coded to rely on this. This year refers to the year the loan was signed.

7.5 Country (restricted hard code) and regions (formula)

See Section 5.3 for details. We use standard international abbreviations for countries. Use the standard abbreviations that are already in the database. Do not substitute your own abbreviations. Once the country name is correctly entered, the Region column will update automatically.

7.6 Borrower (hard code), Borrower Type (restricted hard code), Borrower Code (formula)

Most of the time the Borrower is the respective African government's ministry of finance, so we do not need to fill in the Borrower cell if we know it is the government. Once in a while the recipient will be a state-owned enterprise or even a private African company, in which case we would want to specify who exactly signed the loan and owes the debt.

If you filled out Borrower, then fill out the Borrower Type and Borrower Code as well. The Borrower Code is formula based, so do not change it; copy and paste from existing cells. Borrower Type is hard-coded, but only limited options can be used here. Other columns depend on these two columns to code Borrower Type carefully and exactly as it appears among the options. See Appendix A2 for the limited options of Borrower Type and Borrower Code.

7.7. Financier (restricted hard-code) and Financier Code (formula)

Type in the name of the financier in the column Financier. Consult Appendix A3 for exactly how to type in the names. If Appendix A says "Eximbank," do not enter "Exim bank," "Exim," etc. Type the names verbatim from Appendix A3 and the Financier Code will update the corresponding code. The only exception is contractors who provided suppliers' credit (see section 3.2 for reminder), whose name you can type in directly.

7.8 Types of Finance (formula) and Credit Code (restricted hard code)

Edit Credit Code and the Type of the Finance will be updated automatically. At the end of the day, only Finance types 1-12 and 26 will be included as Chinese loans to Africa. Consult Section 3.2 to refresh your memory, and consult Appendix A4 for allowed Credit Codes.

For confirmed loans, when we cannot find out the type of credit but are certain that there is a loan, we just put in "loan." If we're not even sure of that, just leave it blank.

7.9 Used credit (formula)

If the type of finance entered in a clean credit line, this column will automatically display how much of that credit line is used. The number is derived from the total credit line minus the sum of all sub-credit lines.

7.10 Border Cases (restricted hard code) and Group (formula)

In addition to this database having one of the most complete datasets on Chinese loans to African governments and African state-owned enterprises (SOEs), we have started tracking Chinese loans to African private enterprises as well. We call Chinese loans to African governments and their SOEs Group 1 data, and Chinese loans to private enterprises in Africa Group 2 data.

Our definition of Group 1 and Group 2 loans ultimately comes down to whether the African government is responsible for repaying the loan. Group column is thus a formula based on what you code in Border Cases. The default (blank) Border Cases is Group 1.

Sometimes it is not easy to discern whether a loan is Group 1. Most of the time, you will have to consult a supervisor on which Group a financing belongs to.

7.11 Rprt'd Amount (hard code), Rprt'd Unit (restricted hard code), USD Equiv. (formula), Clean USD (formula)

"Rprt'd Amount" and "Rprt'd Unit," or Reported Amount and Reported Unit, are two hard-coded cells that take on the originally reported amount in millions and currency in whatever report/article we came across. See Section 5.6 for a refresher.

Only use the listed currency 3-letter acronym in Appendix A9. Putting "RMB" instead of "CNY" will lead to an error.

Once you have filled out "Rprt'd Amount" and "Rprt'd Unit," "USD Equiv" will display the USD equivalent using the exchange rate from that year. We currently do not have all the African currency exchange rates for every year, so sometimes USD Equiv. will display zero. This means we need to go look for the exchange rate for that year online and fill in the Ex tab for the formula to work. However, most of the common currencies should be complete. If the reported currency is already in USD, the USD Equiv. will be the same.

The column USD Equiv. displays the USD amount regardless of validity or status of the project/loan. This column should never be used for analysis or summing, but only as a reference.

Clean USD is formula based, and will only display the USD amount if the line is a Chinese loan to Africa that either has the status of Signed, Implementation, or Completed. Unconfirmed Chinese loans to Africa under US$25 million are added automatically too.

7.12 <25mn (Formula)

Completely formula based and with the sole purpose of facilitating formulas in other columns. As long as the formula is there, this column should take care of itself.

7.13 Interest rates and LIBOR/EURIBOR rates (hard code)

Figures entered should be percentages; for a 2% interest rate, put in "2," for a 5% interest rate, put in "5." Allow for one digit after the decimal.

If the rates are based on LIBOR, EURIBOR, or other reference rates, enter the rates in the next column over, such as "EURIBOR 6 months+310 bps" or "LIBOR+1.5." We do not always have the duration (LIBOR 6 months, LIBOR 1 year, etc.), but we record them when we do.

7.14 Repayment, Grace, and Terms (hard code)

See Section 5.7.

7.15 Purpose (hard code)

See Section 5.8.

7.16 Group Project Name (hard code) and Group Project Number (hard code)

For projects that have several phases or components that are financed separately, enter a generic name for all the phases into Group Project Name, then enter an index number for each. These two columns are useful for keep track of projects that may have several phases across non-consecutive years. For example, Zambia's "L400 Lusaka Road Rehabilitation" is a large initiative to build or upgrade urban roads, with individual roads contracted and financed separately. Of these projects, rumors of Chinese financing have been reported for 4 of them. Thus, all four of these projects receive "L400 Lusaka Road Rehabilitation" for its group project name, and each is given an index from 1 through 4. The index number need not reflect the project's chronological order, but merely a count number that records how many sub-projects there are.

7.17 Sector Code & Sub-sector code (restricted hard code), Sector & Sub-sector (formula)

See Section 5.9 and Appendix A5.

7.18 ICT, SGR, CDB SME, Military (hard code)

These manual toggles identify important characteristics of the project that could not be reflected elsewhere in the database. When a project has a certain status, simply type "1" into these cells."

"ICT: Information and communication technologies. If a project is an ICT project, type 1. Projects such as computers for universities, electronic postal systems, and cellphone towers could all be identified as ICT projects, but would classified into sectors such as "Education", "Government", and "Communication". When we need to see all ICT projects across sectors, we can filter for this toggle."

"SGR: Standard Gauge Railways. These refer specifically the SGR system in East Africa, with projects or plans of projects spanning Djibouti, Ethiopia, Kenya, Tanzania, and Uganda. "

"CDB SME: China Development Bank small-medium enterprise loans. CDB has a special instrument for African SMEs through which it lends directly to banks in Africa; they could be private banks, state banks, or regional banks. These banks in turn lend the funds out to local SMEs. We usually do not have information on whether these bank recipients used up the amount or not, nor what types of SME they lent out to."

"Military: projects that relate to the military, including but not limited to purchase of weapons, construction of military base, housing, or training grounds, vehicles with potential military usage, as well as ICT systems for the military.

7.19 Contractor (hard code) and Contract type (restricted hard code)

Provide the contractor's acronym if available. Consult tab Co. for a list of common Chinese contractors. Provide the name of the specific subsidiary when possible, since some parent companies are conglomerates with competing subsidiaries. If acronyms are not available, enter the full name of the company. If there are more than one contractor, list all contractors and separate them by semicolons. Do not put subcontractors here, but put them in the Comments column. Consult the Codes tab for a list of types that are allowed to be entered. Construction contracts and purchasing contracts are the most common.

7.20 Resource Security (hard code)

See 5.11 for details. Enter the name of the resource here, as well as the amount if available per day/per year, etc.

7.21 OECD flow type (formula)

This column automatically updates based on financier and finance type. These categories roughly maps the loans in our database to the categories used by the OECD to identify their own loans and finances.

7.22 Last Checked On (hard code) and Last Checked By (hard code)

Enter the date the line was last edited on, then enter the first and last initials of the person making the change.

7.23 Days Since Last Check (formula)

This cell is automated and counts the number of days since the project was last checked.

7.24 Next Step (hard code)

For cases that you cannot resolve after the amount of time spent as outlined in Section 8.10, write down in this column your queries for your supervisors.

7.25 Inactivity Flag (formula)

This an automated cell that will turn red and show 1 if a signed loan has been signed for more than five years without progressing to implementation. This is to notify researchers that this loan may potentially have expired, and the researchers will do further research on this before deciding if this loan should have the status Inactive.

7.26 Comments

See Section 5.12 for how to enter comments.

7.27 Source

Copy the URL link and deposit into the cells starting from Source and proceeding to the right. You can deposit as many URLs as you want, but each cell should contain only one link.

Interviews and personal communications are typed in here as well, with one interview taking up one cell. The interviews should contain the dates, place, method (phone call, personal interview, email) and the person(s) involved.

CHAPTER 8. TRICKS OF THE TRADE

8.1 Constant Vigilance

Be vigilant about the status of a project. A memorandum of understanding is not the same as a signed loan. A signed contract is not the same as a signed loan. Infrastructure is political and influenced by election cycles. As in the Abuja Light Rail Project, African governments may lay cornerstones, and even authorize the start of construction before a Chinese loan is signed. Sometimes the loan is never signed.

8.2 Framework Agreement ≠ Loan Agreement

A framework agreement is not a loan, but it will likely lead to specific project loans. On the other hand, a true facility (see CDB's US$1.5 billion facility in Ghana) is a loan, and countries need to pay interest and fees as soon as the facility is finalized.

8.3 Project Phases

Frequently a telecoms, road, or electricity project will be done in phases, and sometimes each phase has a different funder. It is critical to record the phase of a project.

8.4 CAD-Fund

CAD-Fund, a branch under the CDB, does not provide loans. CAD-Fund only participates in joint-venture investments, which do not count as loans. However, a particular project may be funded by both a CDB loan as well as a CAD-Fund joint-venture investment. We are interested in the loan part of the deal.

8.5 BOT (Build, operate, transfer) & BOOT (Build, own, operate, transfer)

BOT and BOOT are not themselves loan mechanisms, but we are very interested in knowing if they are ever pursued by Chinese companies in Africa. So please note this in the Comments section if you see such a case.

8.6 Advanced Google Operators

Site operator "site:" allows for searching within a specific URL extension. For example, Googling "Rwanda Kivu Belt Road site:gov.cn" will return results with keys words "Rwanda Kivu Belt Road" only from websites that end in .gov.cn.

Proximity operator AROUND(n) allows you to find phrases only within a certain distance of each other, where "n" is the number of words between the two phrases. For example, Googling "Zambezia AROUND(5) Nampula" will return only results where the phrases "Zambezia" and "Nampula" are separated by fewer than five words.

Type operator "type:" allows you to narrow your search results by file type. Googling "Nigeria debt type:.pdf" will return only PDF files with the words "Nigeria" and "debt" in it.

Consider using the country-specific Google pages when searching. For example, when searching for a loan to South Africa, try using "www. google.co.za" to return local results.

8.7 Troubling-shooting Pesky Webpages

If the webpage is in a language you do not understand, Google usually offers the option of "Translate this page" under each link.

If the page cannot be found or will not load, there is a chance that Google Cache still has it. Google takes a screenshot of most pages when they show up on their search results. To access these screenshots, copy the URL, paste it into Google's search box and add quotations marks around the URL, then press search. If the cache page is still there, you will see it show up in the results. Underneath the title of the result, you will see a green box with a downward pointing arrow. Click on this box, and, if the cache page is still there, you will see the option of "Cached" in the dropdown menu. Click on this to display the cached page.

If you cannot view the webpage (Google search results did not turn up the page you want, the green arrow box is not there, the dropdown menu does not have the Cached button, or Google tells you there is an error after you selected the Cached choice, etc.), it means that Google does not have the page anymore. In this scenario, there are still two other ways to track down the page. First, put the title of your article in quotation marks, and search for it in Google, or copy the first or second sentence (usually available in the Google Alerts themselves), put them in quotation marks and Google search it. This will give you a chance to find pages that have

reposted the original article, or have quoted it in some fashion. You can also use the same approach to find an article behind a pay-wall.

8.8 Beyond desk search

When possible, researchers should email and phone to confirm the status of a project. Contact information can sometimes be found on the contractor's website or on the website of the African ministry that is responsible for the relevant sector. This approach is most likely to succeed when contacting the entity that is supervising the project or a project tender; for example, the Zambezi River Authority Public Relations and Communications Manager for Zambian or Zimbabwean hydropower projects on the Zambezi River. Record these outreach attempts under Comments. Inform supervisors first before doing this.

8.9 China AidData

Please note that China.AidData.org is not considered a reliable source for verification. It can be used to identify new projects.

8.10 Time for Checking Projects

It may take several hours to track down information about a large, complicated loan, so you will be working in teams where one person's best language is English and the other's is Chinese – digging together and sharing findings. The amount of time researchers spend tracking down a loan should be commensurate with the size of the loan.

Counting total team time (divide by the number of people working on the country), spend half an hour or less tracking down any details of loans under US$25 million. Spend no more than two hours of team time on loans from US$25 million to US$99.9 million. Take no more than four hours of team time to process loans of US$100 million and above. When you are unable to confirm the status of a project loan after this amount of time, then flag cases that require special attention from a supervisor. Do this by entering your questions and concerns in the column "Next Steps" and highlighting the row in yellow.

Size of the loan	Allotted time
< US$25 million	30 minutes
US$25 million to < US$100 million	2 hours
$\geq$ US$100 million	4 hours

APPENDIX A

Appendix A1. Status Codes

Status code	Status	Definition
1	Unconfirmed	Either a new rumor, a vague media report, or a commitment or pledge phrased in the future tense. Details should be reflected in the Comments section. Do not record other information in columns, but keep in the Comments section until loan is confirmed.
2	Signed	Two actual people sat down one day and signed it; we want an exact date, signatories, location of loan signing. Not to be confused with "MOU" or "Agreement" situations, which are coded Unconfirmed.
3	Implementation	Construction underway, 開工. A cornerstone or the laying of foundation does not confirm a loan has been signed. We like to see images of construction workers and machinery on site, not simply a local politician posing with a shovel.
4	Completed	Construction completed, "竣工," project handed over, handing over ceremony
5	Canceled: finance	The financing is canceled, but the project is still there
6	Canceled: project	The entire project is canceled
7	Other finances (retired)	Grant, joint ventures with African private sector, loan restructuring, etc.
8	TBD	Project has been identified but we have not checked it yet. This is different than Unconfirmed, which denotes that we have checked but could not confirm. This should be reflected in the Comments section.
9	Duplicate	Duplicates of another project in our database
10	Not China (retired)	Not a Chinese loan

11	Inactive	Loans over US$50 million, signed more than five years ago but still not in implementation (Inactive:Signed), or Unconfirmed for more than five years (Inactive:Unconfirmed). Partially automated.
12	NoCheck: Delete	Projects/finances completely unrelated to the database. This is only used at the discretion of the supervisors.
13	NoCheck: Myth	Rumors of projects/finances that keep popping up even when thoroughly checked. This is only used at the discretion of the supervisors.
14	NoCheck: <25	Unconfirmed loans valued under US$25 million. Do a minimal check for more information (no more than half an hour) but then just include.
15	Expired	Reserved for clean credit lines that have reached its expiration data and can no longer be accessed, even if there are still funds left in the credit line.

Appendix A2. Borrower Codes

Borrower Type	Codes	
AfrGov	1	Government, only reserved for MOFCOM ZILs
AfrStateCom	2	Local state-owned companies, such as electricity, telecom, etc.
AfrStateBanks	3	Local state-owned banks
AfrPrvCom	4	Local private companies
AfrPrvBanks	5	Local private commercial banks
JV	6	Joint venture [consult with supervisor before assigning this code]
ChnCom	7	Chinese companies (SEO or private)
Other:	8	Specify after colon

Appendix A3. Financier Codes

Financier	Codes	Description
Eximbank	1	China Export Import Bank
MOFCOM	2	Ministry of Commerce of China
CDB	3	China Development Bank
CN Gov	4	Unspecified "Chinese Government" source
ICBC	5	Industrial Bank of China
PBC	6	People's Bank of China, the central bank of China. Distinct from the commercial Bank of China.
CCB	7	China Construction Bank
ABC	8	Agricultural Bank of China
CITIC	9	China CITIC
China	10	Unspecified "Chinese" source [for example, "The Chinese would fund X project."]
Contractors	11	Chinese contractors. To accommodate the variety of contractors, this is the catch-all category; anything you type that is not included in any of the other categories will fall under this category.
NotChina:	12	Non-Chinese financiers. Start by typing "NotChina:" followed by details of who instead for this code to show up. Non-Chinese JV investors should be listed here.
Mixed:	13	Several financiers, which may be other non-Chinese financier along with Chinese financiers. For example, ICBC+Standard Bank. Specify after colon. Ideally we would break them down into individual entries, but if we can't, use this. JV investors with at least one Chinese participant should go here. Amounts under Mixed: should be cautiously added, because not all are Chinese. Partial Chinese JVs go here.
Unknown	14	Unknown financier. Use this when we don't know who financed it.
MixedCN:	15	Mixed Chinese entities, such as MOFCOM+Eximbank, or Eximbank + BoC, or Eximbank + Sinohydro. Amounts here can be added directly because they include all Chinese loans. All Chinese JVs goes here.

Other CN financing	16	Private banks, investment funds (CIF)
BoC	17	Bank of China, a commercial bank that is distinct from PBC.

Appendix A4. Finance Type

Code	Finance Type	Description
1	Loan	Unknown types of loan
2	CL	Concessional Loan. Only comes from Eximbank.优惠贷款
3	ZIL	Zero interest loan. Only MOFCOM does this, and this is the only thing that MOFCOM does. 无息贷款、零息贷款、免息贷款
4	CommL	Bank Loan. Commercial loans at nonconcessional rates. Only use this if you have solid proof that it is a commercial loan. 商业贷款
5	EBC	Export Buyers' Credit. Offered by Eximbank in which they provide loans to governments to buy goods or services from Chinese contractors. The African countries would have to pay back these loans. Not to be confused with Seller's Credits. 买方信贷
6	PEBC	Preferential Export Buyers' Credit. Same with EBC above, but at concessional rates. 优惠出口买方贷款
7	MFA	Master Facility Agreement
8	MFA-sub	Master Facility Agreement sub-projects
9	FA	Eximbank Framework Agreement
10	FA-sub	Eximbank Framework Agreement's individual loan finance agreement

11	FrameW	Framework Agreement. The outline of the loan that the two sides would later officially sign. These Framework Agreements may contain details such as interest rates and terms. The two sides may take these frameworks home to deliberate further before officially signing the loan later. Nothing is set in stone yet at the Framework Agreement stage, and would be considered Unconfirmed if only Framework Agreements were signed. 框架协议. No fees are being paid at this point. Applies to non-CDB or non-Eximbank loans.
12	SC	Suppliers' Credit. Chinese firms providing loans to African public or private entities for goods or services.
13	SELC	Seller's Credit. Offered by Eximbank to Chinese companies to sell equipment abroad. It would be the Chinese company owing the money, and the African country won't owe anything. This would still be considered a loan to Africa, since those Chinese companies operating in Africa will have to be African registered. 出口賣方信貸 .
14	Import credit	These are given to Chinese companies to import goods from Africa
15	BOOT Investment	Build, own, operate, and transfer
16	Private investment	Companies' (could be state-owned, Chinese, or not Chinese) investment going to the African public or to private companies
17	JV	Private+Private JV, CAD-Fund JVs go here
18	OtherCredit	Other types of credit. Specify after colon. Hopefully we spelled out most of the credit types out there so that we won't get too many of these.
19	OtherAid	Other types of aid. Specify after colon.
20	Unknown	Unknown types of financing such as if the finance is still under negotiation, or we can't find information on them.
21	Grant	
22	Debt restructure	Debt forgiveness, for example
23	Technical assistance	

24	Mixed	Mixed financing. Specify in the Comments section. Ideally we would break them down into individual entries, but if we can't, we'll keep them as Mixed:. For example, Grant+ZIL over US$25 million, investment + loan, or Chinese loan + foreign loan, etc. Anything we will hesitate to add together goes here.
25	State Budget	African government financed
26	MixedCNCred	Mixed Chinese government loans/credits. For example, Eximbank CL + MOFCOM ZIL. Don't use this if this is mixed loan+grant, or loan+unknown aid; use code 24 Mixed instead. Amounts here can be added directly because they are all Chinese loans, we just don't know what kind specifically.
27	Syndicated	Includes club loans. If we do not know the exact Chinese contribution, keep Financiers as Mixed. If we know the exact Chinese contributed amount, then use that amount and change the Financier to the Chinese financier, keeping Type as Syndicated.
28	Shareholder loan	Loan financing provided by shareholders.
29	Currency swap	RMB currency swap

Appendix A5. Sector Codes[15]

Code	Sector	Common/uncommon examples. Not exhaustive.
11	Education	Schools, technical schools, long-distance learning, not including agricultural schools
12	Health	Hospitals, disease control, medical R&D, medical training
13	Population	Population policies
14	Water	Water and sanitation, sewage, river basin development (NOT INCLUDING HYDROPOWER, AGRICULTURAL IRRIGATION, OR RIVER TRANSPORT, OR FLOOD PREVENTION)

---

15. Consult the tab Codes in the spreadsheet for sub-sector codes

15	Government	Constructing government buildings such as courthouses, civil society, e-government, national security or police force ICTs
16	Other social	Other infrastructure, social housing, stadiums, libraries, conference and convention centers, youth centers, gyms
21	Transport	Roads, railways, airports, harbours, cargo storage (except for granary, which is Ag.)
22	Communication	TVs, radios, ICT, fiber optics, telephone lines, (not including national security or police force ICTs, e-government, or long-distance learning)
23	Energy	Energy generation and supply. Fire/solar/hydro power plants, substations, transmission lines, gas pipes, energy R&D
24	Banking	Financial services; fight inflation or support local currency
25	Business	Support business associations, privatizations, building rural markets
31	Agriculture	Fisheries, forestry, livestock, agricultural R&D, agricultural extension, irrigation works, cold chains for fishery products
32	Industry	Oil refineries, manufacturing, small medium enterprises (SMEs) development (not including agricultural SMEs)
322	Mining	Coal mining, oil and gas exploration, precious metals, fertilizer minerals (potassium, nitrate)
33	Trade	Trade policies and regulations and trade-related adjustments, TOURISM, customs equipment (container scanners, x-rays)
41	Environment	Environmental protection, floor prevention, reserves
43	Multi-sector	Rural development, non-sector specific R&D, Non-agricultural alternative development
51	Budget	Paying civil servant salaries
52	Food	Food aid/food security assistance
53	Other commodity	LINES OF CREDITS
60	Debt	Debt-forgiveness or restructuring
72	Humanitarian	Emergency response
73	Reconstruction	Reconstruction relief and rehabilitation

74	Preparedness	Disaster prevention and preparedness. NOT INCLUDING FLOOD PREVENTION
91	Administrative costs of donors	
93	Refugees in donor countries	
99	Unallocated	Used for loans with vague descriptions such as "socio-economic cooperation". CDB and Eximbank credit lines themselves will have Unallocated as their sector, while individual disbursements for specific projects be assigned their own relevant sector.

Appendix A6. Border Cases

Code	Upstream Lending Description	African gov's pay?
1	An African SOE's JVs with Chinese company that borrowed Chinese policy bank money; all participants of the JV must repay the loan.	Yes
2	A Chinese company borrows money to participate in a JV with an African government.	No
3	An African government SOE sets up a JV with a Chinese company (or non-Chinese company). We include the loan if the shares to the African SOE owned by the African side is 50% or higher.	Yes
4	Chinese companies borrow Chinese policy bank money to invest in Africa.	No
5	A Chinese company borrows Chinese policy bank money to lend out in Africa as SC.	Yes
6	A Chinese company lends out SC in Africa.	Yes
7	A private company or bank (be they registered in Africa or not) borrows Chinese policy bank money.	No
8	A private Chinese company lends out their own money to African non-government or non-SOE entities.	No
9	Chinese private company offers loans or mortgages to private contract farmers or property buyers.	No

Appendix A7. Country Acronyms

Official name	Database name	Project-ID Prefix
[Africa regional]	Regional	AFR
Algeria	Algeria	DZ
Angola	Angola	AO
Benin	Benin	BJ
Botswana	Botswana	BW
Burkina Faso	Burkina Faso	BF
Burundi	Burundi	BI
Cameroon	Cameroon	CM
Cape Verde	Cape Verde	CV
Central African Republic	CAR	CF
Chad	Chad	TD
Comoros	Comoros	KM
Congo, Republic	ROC	CG
Congo, The Democratic Republic of the	DRC	CD
Côte d'Ivoire	Cote d'Ivoire	CI
Djibouti	Djibouti	DJ
Egypt	Egypt	EG
Equatorial Guinea	Equatorial Guinea	GQ
Eritrea	Eritrea	ER
Eswatini	Eswatnit	SZ
Ethiopia	Ethiopia	ET
Gabon	Gabon	GA
Gambia	Gambia	GM
Ghana	Ghana	GH
Guinea	Guinea	GN
Guinea-Bissau	Guinea-Bissau	GW
Kenya	Kenya	KE
Lesotho	Lesotho	LS
Liberia	Liberia	LR

Libya	Libya	LY
Madagascar	Madagascar	MG
Malawi	Malawi	MW
Mali	Mali	ML
Mauritania	Mauritania	MR
Mauritius	Mauritius	MU
Morocco	Morocco	MA
Mozambique	Mozambique	MZ
Namibia	Namibia	NA
Niger	Niger	NE
Nigeria	Nigeria	NG
Rwanda	Rwanda	RW
São Tomé and Príncipe	Sao Tome & Principe	ST
Senegal	Senegal	SN
Seychelles	Seychelles	SC
Sierra Leone	Sierra Leone	SL
Somalia	Somalia	SO
South Africa	South Africa	ZA
South Sudan	South Sudan	SS
Sudan	Sudan	SD
Tanzania	Tanzania	TZ
Togo	Togo	TG
Tunisia	Tunisia	TN
Uganda	Uganda	UG
Western Sahara	Western Sahara	EH
Zambia	Zambia	ZM
Zimbabwe	Zimbabwe	ZW

Appendix A8. Currency Acronyms

Acronym	Description	Acronym	Description
CNY	Chinese yuan	LYD	Libyan dinar
EUR	Euro	MGA	Malagasy ariary
XOF	West African Franc (Benin, Burkina Faso, Cote d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal, Togo)	MWK	Malawian kwacha
XAF	Central African Franc (Cameroon, Central African Republic, Republic of Congo, Chad, Equatorial Guinea, Gabon)	MRO	Mauritanian Ouguiya
XDR	IMF SDR/AfDB UA (as % of USD)	MUR	Mauritius rupee
DZD	Algerian dinar	MAD	Moroccan dirhams
AOA	Angolan kwanza	MZM	Mozambican metical
BWP	Botswana pula	NAD	Namibian dollar
BIF	Burundian franc	NGN	Nigerian naira
CVE	Cape Verde escudo	RWF	Rwandan franc
KMF	Comoro franc	STD	Sao Tome e Principe dobra
CDF	Congolese franc (DRC)	SCR	Seychelles rupee
DFJ	Djiboutian franc	SLL	Sierra Leonean leone
EGP	Egyptian pound	SOS	Somali shilling
ERN	Eritrean nafka	ZAR	South African Rand (Namibian dollars, Lesotho loti, and Swaziland lilangeni are pegged to the Rand at par)
ETB	Ethiopian birr	SSP	South Sudanese pound
GMD	Gambian dalasi	SDG	Sudanese pound
GHS	Ghanaian cedi	SZL	Swazi lilangeni
GNF	Guinean franc	TZS	Tanzanian shilling

KES	Kenyan shilling	TND	Tunisian Dinar
LSL	Lesotho loti	UGX	Ugandan shillings
LRD	Liberian dollar	ZMW	Zambian kwacha

APPENDIX B. INFORMATION CHECKLIST

☐ Status

☐ Year

☐ Country

☐ Financier and Borrower

☐ Finance Type

☐ Reported Financing Amount

☐ Financing Terms

☐ Purpose

☐ Sector/sub-sector

☐ Contractor

☐ Resource Security

☐ Comments

☐ Source

APPENDIX C. SOURCE CHECKLIST

1. site:.gov.cn
   1.1 site:.mofcom.gov.cn
   1.2 site:.fmprc.gov.cn
   1.3 eximbank.gov.cn
   1.4 cdb.com.cn
   1.5 www.mofcom.gov.cn/article/cwgongzuo/jingmaoluntan/zhaobiao
2. site:gov.et, go.ke, etc.
   2.1 ministry of finance
   2.2 debt agency
   2.3 central bank
   2.4 state-owned enterprises
   2.5 president's office
   2.6 ministry of communication & ICT etc.
   2.7 parliamentary debate records
   2.8 ministry's Facebook pages
3. site: focac.org
4. Chinese embassies
5. Chinese contractors, sub-contractors & suppliers
   5.1 Contractor Facebook
6. Security office filings for companies & government bond Prospectus
   6.1 U.S. Securities and Exchange Commission (SEC)
   6.2 European Securities and Markets Authority (ESMA)
   6.3 Hong Kong Stock Exchange, etc.
7. Chinese government media
   7.1 people.cn
   7.2 chinadaily.com
   7.3 cctv.com
   7.4 news.cn
   7.5 xinhuanet.com
8. African state-owned media
   8.1 angop.ao
   8.2 suna-sd.net, etc.
9. Lexis Nexis, Access World News (JHU access)
10. site:.cn
11. site:.et, .ke, etc
12. WikiLeaks
13. sectors-specific/business sources
    13.1 hydroworld.com
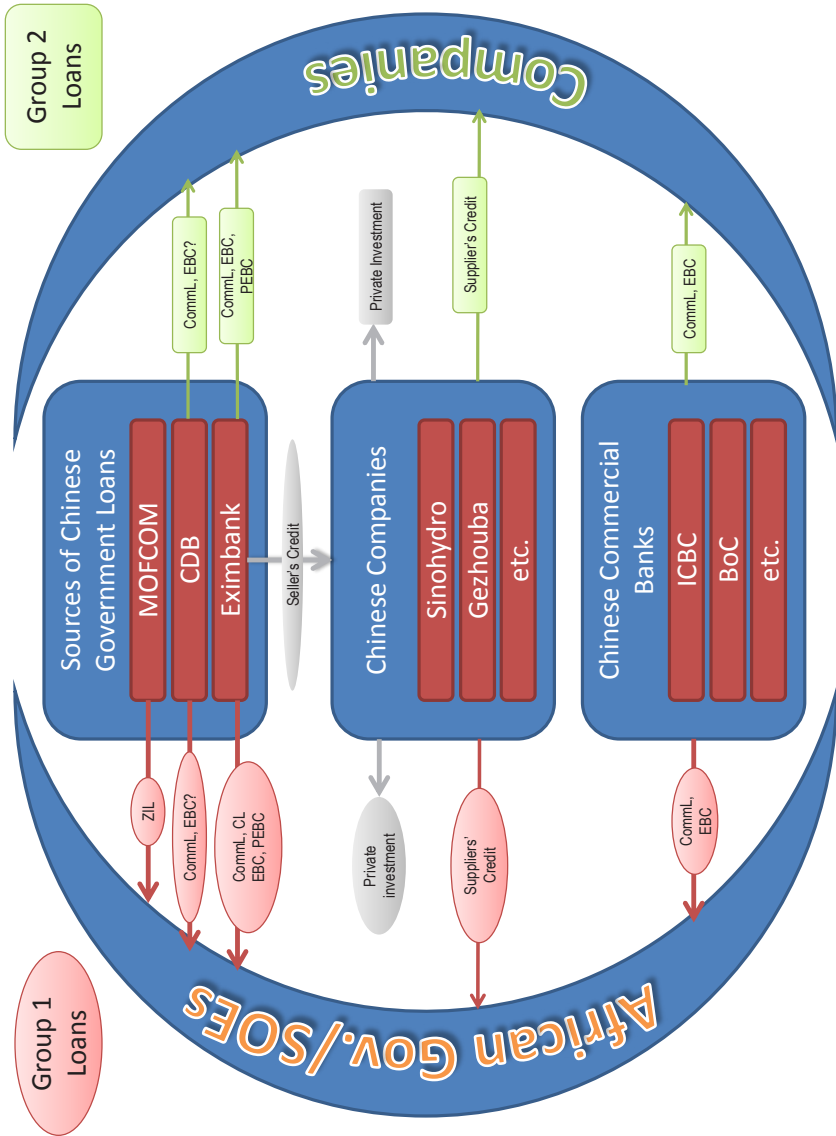   13.2 africanbusinessmagazine.com
    13.3 engineeringnews.co, etc.

14. site:imf.org
    14.1 Article IV
    14.2 Debt Sustainability Report
15. site:worldbank.org
16. site:eiti.org
17. Google Scholar
18. LinkedIn
19. bbs.qufeizhou.com/forum.php
20. www.chineseinafrica.com/forum.php
21. www.zimbbs.com/forum.php

APPENDIX D. COMMON CHINESE CONSTRUCTION CONTRACTORS

English Full Name	English Acronym	Chinese Full Name	Chinese
China CAMC Engineering Co., Ltd.	CAMCE	中工国际工程股份有限公司	中工国际
China Harbour Engineering Company Ltd	CHEC	中国港湾工程有限责任公司	中国港湾
China International Water & Eletric Corp.	CWE	中国水利电力对外公司	中水电
China Machinery Engineering Corporation	CMEC	中国机械设备工程股份有限公司	中设
China National Complete Plant Import & Export Corporation	Complant	中国成套设备进出口（集团）总公司	中成
China Overseas Engineering Group Co. Ltd.,	COVEC	中国海外工程有限责任公司	中海外
China Railway Construction Corporation Limited	CRCC	中国铁建股份有限公司	中铁建
China Railway Group Limited	CREC	中国中铁股份有限公司	中铁
China Road and Bridge Corporation	CRBC	中国路桥工程有限责任公司	中国路桥
China State Construction Engineering Corporation	CSCEC	中国建筑工程总公司	中建/中国建筑
CITIC Group	CITIC	中国中信集团公司	中信
Dongfang Electric Corporation	DEC	东方电气集团	东方电气
Metallurgical Corp of China	MCC	中国冶金科工集团公司	中冶

SEPCO Electric Power Construction Corporation	**SEPCO**	山东电力基本建设总公司	山东电建
SEPCOIII Electric Power Construction Corporation	SEPCO3	山东电力建设第三工程公司	山东电建三公司
Shanghai Construction Group Co. Ltd.,	**SCG**	上海建工集团	上海建工
Sinohydro Corporation Limited	Sinohydro	中国水利水电建设股份有限公司	中水
TBEA Co., Ltd	**TBEA**	特变电工股份有限公司	特变电工
Weihai International Economic & Technical Cooperative Co., Ltd	**WIETC**	威海国际经济技术合作股份有限公司	
Yunnan Construction Engineering Group Co.	**YNJG**	云南建工集团有限公司	云南建工

APPENDIX E. MAP OF AFRICA

APPENDIX F. LOAN RELATIONSHIPS

Group 2 Loans

Companies

Group 1 Loans

African Gov./SOEs

Sources of Chinese Government Loans
- MOFCOM
- CDB
- Eximbank

Chinese Companies
- Sinohydro
- Gezhouba
- etc.

Chinese Commercial Banks
- ICBC
- BoC
- etc.

CommL, EBC?
CommL, EBC, PEBC
Private Investment
Supplier's Credit
CommL, EBC
Seller's Credit
ZIL
CommL, EBC?
CommL, CL EBC, PEBC
Private investment
Suppliers' Credit
CommL, EBC

Index

NOTES

NOTES

About the Authors

Deborah Bräutigam, Ph.D.

CARI Director and Professor of Comparative Politics and Director, International Development Program (IDEV), Paul H. Nitze School of Advanced International Studies (SAIS), The Johns Hopkins University

A leading expert on China in Africa, Professor Bräutigam is the author of The Dragon's Gift: The Real Story of China in Africa (Oxford University Press, 2010; Chinese version published by Chinese Academy of Social Sciences Press) and Chinese Aid and African Development: Exporting Green Revolution (St. Martin's Press, 1998). She is also co-editor of Taxation and State-Building: Capacity and Consent (Cambridge University Press, 2008) as well as numerous articles published in academic journals and public affairs media. Professor Bräutigam regularly advises international agencies and governments on China-Africa economic engagement. Her latest book, Will Africa Feed China?, was published in October 2015 by Oxford University Press.

Jyhjong Hwang, Consulting Senior Research Assistant

Jyhjong Hwang is a Ph.D. student in Political Science at Ohio State University, specializing in International Relations. Her research focus is in the politics of foreign aid, international development, and international cooperation. A former Peace Corps Education Volunteer in Namibia (2010-2012), she worked as CARI's Senior Research Assistant from 2015 to 2018. She holds a B.A. in English and International Relations from Tufts University and an M.A. in International Economics and International Development from Johns Hopkins SAIS.