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DISSECTING CHINESE INVOLVEMENT IN ROAD CONSTRUCTION PROJECTS IN TANZANIA

by

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A thesis submitted in partial fulfillment of the requirements
for graduation with Honors in the International Studies

Craig Just
Thesis Mentor

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Dissecting Chinese Involvement in Road Construction Projects in
Tanzania
Strategic Roadways and Resources

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Faculty Mentor: Craig Just
Spring 2017

Abstract

China is considered to be the world's second-largest economic power, and in recent years has set a precedent for fast economic growth. In addition to this rapid economic growth, China has seriously increased foreign direct investment all over the world, particularly in sub-Saharan Africa. This paper will examine the progression of the relationship between China and Tanzania, specifically by delving into the complicated issues of resource governance and how these issues relate to the growing presence of Chinese construction conglomerates. It is currently estimated that only 6.7% of Tanzania's roadways are paved, making Tanzania a great candidate for infrastructural investments (Hopcraft). The Chinese government has aided Tanzania through FDI and has sent state-owned contracting enterprises to help with construction. This new economic partnership promises growth and development on both sides, however, dissecting and understanding the specific motivations behind China's involvement can be complex. Ultimately, this partnership brings a lot of positive opportunities to both China and Tanzania, but there are reasons for Tanzania to remain skeptical.

Introduction

Development studies and development theory have traditionally taken a westernized approach. Aid agencies, such as the International Monetary Fund (IMF) and the World Bank have dominated the developing world's cause towards economic development. However, these institutions have proven themselves to be somewhat controversial at times by pushing neoliberal policies that do not take into consideration the differences that exist between different countries. More specifically, there is little consideration for the different challenges faced in developing countries. Additionally, the aid that comes from these agencies typically arrives in the form of Structural Adjustment Programs (SAPs), which are conditional loan programs that typically encourage the borrowing governments to reduce spending in order to receive the loan (Kurian). This usually materializes in the form of cutting social programs to refocus on debt repayment. In addition to the restructuring of government spending, a lot of these loans are conditional, based on a country's political situation. According to Shiza and Kariwo, "neoliberal policies are employed by the World Bank and IMF to manage their political and economic interests over economically weak nations perceived to be in international debt crisis" (Shiza and Kariwo). Complications with these traditional programs have led developing countries to begin to seek aid elsewhere, this is where China steps in.

The BRIC countries in Africa

South-south cooperation is a development strategy that centers on the idea that "developing countries" help other "developing countries". This concept is built on a foundation of assumed solidarity that exists in between what have historically been considered "developing countries" and the drive for global economic growth. The BRIC countries, which include Brazil, Russia, India, and China- have all been considered key players in this movement, and have

helped stimulate south-south cooperation. Especially for the cases of Brazil, India, and China, the term south-south cooperation has been used to characterize the growing foreign direct investment flowing from these countries into the African continent. The variety of different aid programs that now exists between these groups accounts for 10 percent of the total aid the African continent receives (McMichael). Aside from their investment in Africa, these BRIC countries have gained global recognition as growing economic powers over the years and now contribute more than 50 percent to recent world economic growth (McMichael). This paper will explore the growing relationship of the BRIC countries and Africa by closely examining the specific economic connections between China and Tanzania.

China as an Investor

Especially within the last two decades, China has proven itself of extreme economic capabilities. After the United States, China is considered to be the world's second-largest economic power, surpassing Japan in 2010 (McMichael). In these recent years of growth, Chinese investment in sub-Saharan Africa has dramatically increased. The World Bank reports, "China is one of Tanzania's biggest trading partners and an increasingly important source of development finance and FDI. In 2014 the total value of Sino-Tanzanian trade surged to about US\$2.6 billion, up from negligible levels in 2000" and additionally, "the value of China's development finance to Tanzania has also grown substantially in recent years, including US\$1.2 billion in 2013/14-2014/15 for the construction of the gas pipeline from Mtwara to Dar es Salaam" (World Bank Group). As an economic power, China is constantly looking for resources and markets to trade and expand to. Sub-Saharan Africa, and in this case Tanzania, provides a relatively untapped market of resources and trading partners that can be seen as an area for expansion and growth.

Tanzania

Tanzania is a country in east Africa, located next to the Indian Ocean, giving the country a strategic location in terms of global trade. It is known for its rich biodiversity and is home to multiple world-renowned national parks. In 1997, the Tanzania Investment Centre (TIC) was established to facilitate and encourage foreign and domestic investment partnerships. The Tanzania Investment Centre (TIC) has been largely successful in doing just that. In the past ten years, they have “registered 7,159 investment projects worth over 154 billion US dollars, with the potential of creating close to a million jobs” (AllAfrica). As mentioned previously, the TIC has worked to promote partnerships with both foreign and domestic actors and between 2005 and December 2014, projects owned by Tanzanian investors made up 49 percent of the total registered projects through the organization. The top three foreign partners that have invested through the TIC are the United Kingdom, the United States, and then China with US\$3.3 billion invested into this organization (AllAfrica).

It is difficult to get an accurate gage of the exact amounts and locations of all of the untapped reserves of natural resources in the African continent. Pair this with the fact that it is an incredibly competitive market; it is no wonder that there are such tense controversies and issues that surround the natural resource trade. The rest of the world, especially the countries with quickly growing economies, is constantly scrambling to secure guaranteed supplies of natural resources and commodities to fuel this growth. The global need for energy sources and minerals has driven many different strategic alliances throughout history. According to Kaplinsky and Morris, these are some of the driving factors that can help explain the nature and growth of modern Chinese FDI into sub-Saharan Africa. Specifically, the investments that are channeled into building infrastructure and transportation routes. This paper argues that the recent increase

in Chinese actors building strategic roadways in Tanzania is driven by the need to get mineral and energy resources out of the country and into China.

History of Chinese Involvement in Tanzania

The country we consider to be modern-day Tanzania was born in a divided world; in the late 1950s and 1960s when many sub-Saharan African countries began to gain independence, the western world was preoccupied with the socialist Soviet Union and the Cold War. In such divided times, newly independent African countries were looking to build relationships with fresh partners to move on from the colonial relationships they once had. It was during this time that China and Tanzania began to cultivate a relationship. In the name of solidarity against the larger imperialist powers, China provided sympathetic support to the cause for Tanzanian national independence (Chau). Before Tanzania existed as one country, there existed two separate colonies, Zanzibar and Tanganyika. In 1964, the island of Zanzibar staged a revolution, which according to Chau, “Journalist Lawrence Fellows later observed, ‘China’s big initial success in Africa was in helping to stage a revolution in Zanzibar in 1964’” (Chau). On January 17th in 1964, the Chinese government officially recognized the new revolutionary government of the People’s Republic of Zanzibar (Chau). The mainland of what is modern-day Tanzania, Tanganyika, at this point in time was still under British rule. Quickly after Zanzibar gained independence, there was a revolution in Tanganyika as well. During this time, China offered various forms of aid to Tanganyikan soldiers, “China offered to replace British arms with Chinese weapons free of charge, including tanks, mortars, rockets, and other weapons” (Chau). This aid during the post-colonial transition resulted in a newly formed bond between the two countries. On April 26, 1964, the United Republic of Tanganyika and Zanzibar united to form

one country, Tanzania. From this point forward, financial aid to be put towards infrastructural development projects began to flow from China to the newly independent country:

The *New York Times* reported in 1964 that China had extended a total of \$42 million in credits and grants to the United Republic of Tanganyika and Zanzibar for that year. In October of that year the *New York Times* reported that Beijing created two new departments in the foreign affairs ministry to handle relations with Africa. Chinese aid was directed to Tanzania as a whole as well as to Zanzibar specifically. (Chau)

China began to fund various projects in Tanzania. Among these projects were two-high powered transmitters, a state-operated farm, and a fully integrated textile mill outside Dar es Salaam (Chau). From this point forward, other projects began to develop and new actors stepped in.

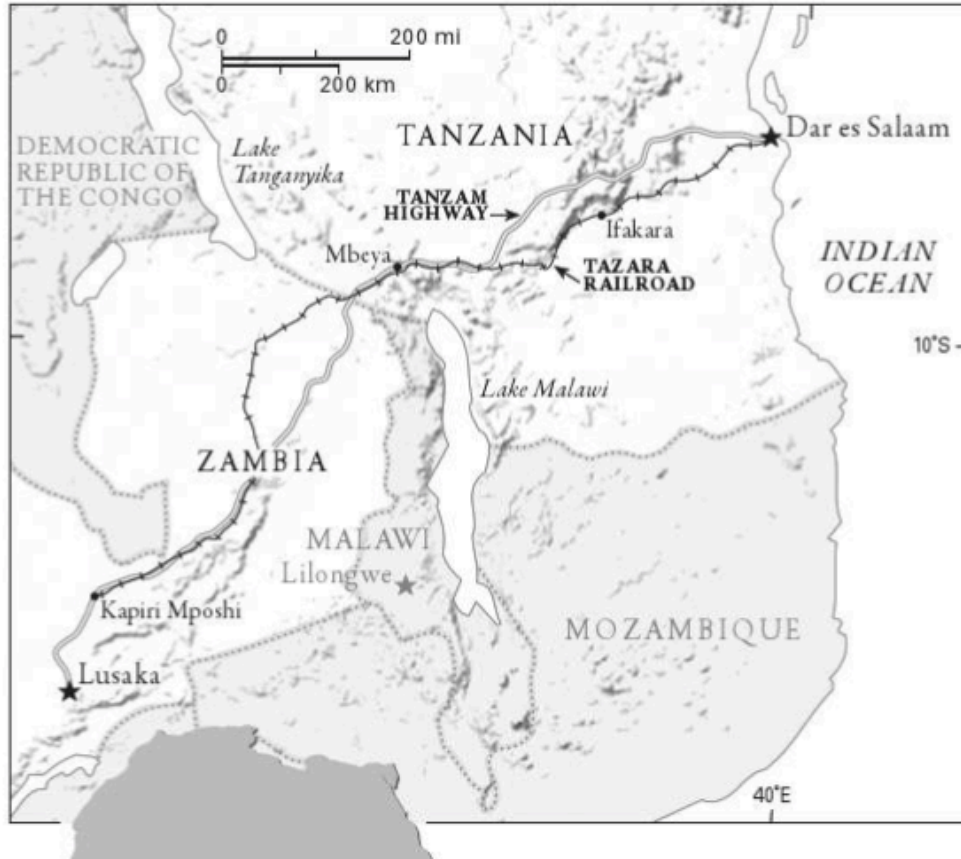
The first post-colonial Tanzanian president Julius Nyerere and the Zambian president, Kenneth Kaunda, had the hopes of building a railway together in order to connect the Zambian copper belt with the port of Dar es Salaam, giving them access to a route towards the Indian Ocean (Monson). China had been present in the African continent in various locations during the post-colonial transition, supporting the new and emerging socialist governments. While the socialist Tanzanian government struggled to find the financial support of Western lending organizations, like the World Bank, for this new railway project, China willingly stepped in by providing the funds and the labor to complete the project (van Dijk). This was the first project in which China and Tanzania worked together on such an incredibly large scale. After the completion of the TAZARA railway project, Chinese presence in Tanzania has only grown deeper:

In 1975, China had more programs in Africa than did the United States. The culminating point was reached in 1976, with the completion of the railway link between Zambia and Tanzania to transport Zambian copper to Dar Es Salaam. The building of this very large-

scale project employed 15,000 Chinese workers and it has made China one of the main donors to Africa. At the time, China's aid to Africa was larger than its trade with Africa (van Dijk).

For post-colonial Zambia and Tanzania, the TAZARA railway represented so much more than infrastructural development. It was nicknamed the "Freedom Railway" since it was the first successful large-scale development project completed after colonial rule. For China, the TAZARA railway project allowed them to be recognized on an international stage, something that China had hoped to do, "China's investment in African development assistance was part of a drive to be acknowledged as a world power" (Monson). Map one below depicts the course of the TAZARA railway project. As seen in the map, the railway crosses the Zambia-Tanzania border and ends at the port of Dar es Salaam. Accompanying the TAZARA railway is the Tanzam highway, a project that had been funded by the United States (Monson).

Map One: The TAZARA Railway in Tanzania (Monson)



After the post-colonial transition and the TAZARA railway project, different types of Chinese involvement, investment, and interest developed in sub-Saharan Africa. Different actors began to emerge and work on varying scales. According to Kaplinsky and Morris, these new waves of involvement occurred in different stages after the post-colonial transition. The nature of these different waves of involvement can be explained and compared in Table one below.

**Table One: Size, Sector, and Ownership of Chinese investors in SSA
throughout the different waves of Chinese involvement**

(adapted from Figure 1 in Kaplinsky and Morris)

Different Waves of Involvement	Dominating Actors	Size	Activities
First Wave	Central government SOEs	Large	Predominantly resources and infrastructure services
Second Wave	Provincial government SOEs	Large-Medium	N/A
Third Wave	Sector incorporated in China	Medium	Manufacturing, wholesale and services
Fourth Wave	Private sector incorporated in SSA only	Small	Petty manufacturing and retail

In the mid-1990s, the majority of Chinese actors entering sub-Saharan Africa were large state-owned enterprises (SOEs). The rise of these SOEs in sub-Saharan Africa can be attributed to China's growing need for resources and their growing trade partnership with Africa. At this point in time, the majority of Chinese-aid-funded projects in sub-Saharan Africa focused on building infrastructure and public buildings. These SOEs served as investors and contractors to these projects (Kaplinsky and Morris). The latest and most current wave of Chinese involvement in Africa showcases the entrance of more private sector enterprises. In certain cases, these private enterprises are owned by Chinese citizens who had originally come to Africa working for one of the SOEs but stayed to become autonomous entrepreneurs (Kaplinsky and Morris). Table one is meant to illustrate the diversity of China's economic engagement in sub-Saharan Africa throughout the years. Ultimately, at this point in time, in the interest of examining resource

extraction and export, it is the investment in Tanzania's roadways that are of particular importance.

Tanzania's Roadways

The construction and maintenance of working infrastructure, especially roadways, is a crucial component of driving a country's cause towards economic development. Infrastructure and transportation networks not only facilitate the movement of people and goods, but work as networks to connect marketplaces and places of commerce. For a natural resource-rich country like Tanzania, well-established roadways and ports are crucial in order to fully capitalize on these resources and transform them into profitable commodities. According to the Africa Infrastructure Country Diagnostic report by the World Bank, not only is Tanzanian infrastructure considered below-average compared to other sub-Saharan countries, but they also would require US\$2.9 billion investment in their infrastructure to compare to other "more developed" nations (Hopcraft). It is currently estimated that Tanzania has 103,706km of roadways and only 6.7% of them are paved, meaning the overwhelming majority of them are not (Hopcraft). TANROADS, the Tanzania National Road Agency, illustrated this point in Map two to represent the network of trunk roads in Tanzania. The agency classifies roadways into two separate categories, trunk roads and regional roads. Trunk roads are larger, and connect major towns or serve a larger purpose. Regional roads are smaller in comparison.

Map Two: Tanzania's Trunk Roads Network (TANROADS)

*** Map two is located in Appendix one at the end of this document**

In Map two, the paved roads are represented with thick black lines, while unpaved roads are depicted in red. The majority of the unpaved trunk roads are in the northeast and western half of the country. One thing to note is the northeastern-most, large, unpaved road; this route runs

through Serengeti National Park and Ngorongoro National Park, two areas famous for their biodiversity and wildlife migration patterns. The paving of this roadway has been a topic of controversy recently and will be discussed further in a later section. To the southwest, another section of unpaved roadway is worth noting. The red line that flows from Njombe to Lake Nyasa, the lake that shares its borders with Tanzania, Malawi, and Mozambique is where the strategic Liganga region is located. The Liganga region is known for its mines that contain minerals such as iron, vanadium, and titanium (Sutton and Olomi).

According to Hopcraft, “simulations suggest that improved infrastructure and roads would increase Tanzania’s per capita growth rate by as much as 3.4%^{iv}”, but it is not only the Tanzanian economy that would benefit from these changes. Tanzania has the potential to become a major hub of commerce for all of East Africa. Tanzania shares its borders with eight other East African countries: Kenya, Uganda, Rwanda, Burundi, the Democratic Republic of the Congo, Zambia, Malawi, and Mozambique. Of these eight countries, five of them are completely landlocked. Tanzania’s access to the Indian Ocean and its coastal industrial city Dar es Salaam are not only critical to Tanzanian economic development but also for many of the surrounding countries (Hopcraft). For this reason in particular, Tanzania is an attractive investment for many financial institutions and global enterprises.

Who is funding these projects?

Tanzania’s strategic location means that many different groups would see economic benefits from a well-established transportation network there. The breakdown of investors in these construction projects shows what other actors seek to benefit from these new roadways:

Of the 52 current road construction projects in Tanzania, 18 are funded by the Government of Tanzania, 15 are financed by multilateral aid, 5 are financed by bilateral aid, 8 by the World Bank, and 6 are funded by the Millennium Challenge Corporation.

Chinese companies account for 72% of the awarded construction contracts, 9% of the road construction companies are from the East African Community, 11% are European, and the remaining 8% are companies from South Africa, South Korea, and Japan (Hopcraft).

For a better understanding of these statistics, multilateral aid refers to aid provided by multiple countries, or a group of countries in the form of an organization/institution, such as the World Bank or the African Development Bank. Bilateral aid refers to aid flowing from one country to another. Referenced above, The Millennium Challenge Corporation is a bilateral and independent United States foreign aid agency. According to this data, the Government of Tanzania and multilateral aid currently fund the majority of current road construction projects in Tanzania, however it is important to understand the rest of the construction process and dissect the sources of the funds behind these investors.

The African Development Bank (AfD) Group is an institution founded in 1964 and comprised of three different constituent institutions that work towards the sustainable economic development in its regional member countries by “mobilizing and allocating resources for investment in regional member countries and providing policy advice and technical assistance to support development efforts” (African Development Bank). The African Development Bank (AfD) is the Group’s parent organization and has 78 different member countries. Of these member countries, 53 are African countries, called regional members. The remaining 25 countries are non-African countries; both China and the United States are considered non-regional members of the AfD and are big investors (African Development Bank). According to the African Development Bank Group:

At the end of 2012, Chinese investments in Africa totaled US \$20 billion. With an initial contribution of US \$14.59 million to the AfDB, China has taken part in eight

replenishments of the ADF and pledged a total contribution of US \$486 million, US \$122 million of which was for the ADF XI (2008-2010). China contributed US \$125,815,361.67 to ADF-XII, which corresponds to a 5 per cent increase from its ADF-XI contribution. Its burden share represents 2.052 per cent of ADF-XII (African Development Bank).

*ADF-XI and ADF-XII refers to different periods of investment within the African Development Fund

China invests heavily in the African Development Bank and the African Development Fund, one of the three constituent institutions within the Group. The current and ongoing projects the African Development Bank funds in Tanzania focus on multiple areas of development, such as transport support, transit infrastructure, sustainable water and sanitation delivery, urban water supply and sanitation, skills development for labor market, road sector support, and energy support. The ongoing projects that specifically focus on infrastructure include: the Transport Sector Support Program, and the Road Sector Support Projects, broken into two phases. These projects funded by the African Development Fund are all implemented by TANROADS, the Tanzania National Roads Agency (African Development Bank).

Lastly, it would be impossible to talk about Chinese FDI without mentioning the China Development Bank, specifically, the China-Africa Development Fund. The China Development Bank is a state-owned lending bank that funds various development projects throughout the world. The China-Africa Development Fund is one of their subsidiary projects, created in 2006 at the Forum for China-Africa Cooperation Summit in Beijing (Harare Beijing Lovemore Chikova). Since its beginning, the China-Africa Development Fund has taken to various newspapers announcing certain projects and pledging billions of USD towards these different

projects. However, finding a full list of all of their specific development projects and progress has proven to be nearly impossible in comparison to the data available on other lending organizations. Although the specificity is lacking, there is evidence that this fund, since its creation, has generated billions of dollars for investment. To start the fund, the China Development Bank itself invested US\$1 billion back in 2006. By 2015 they had reached a total of US\$5 billion for investment. President Xi Jinping then proposed US\$5 billion more at the Focac summit in South Africa that same year (Poon and Back). China is willing and prepared to invest billions more in the African continent through the China-Africa Development Fund, according to AllAfrica, an African news source that seeks to share information about the African countries throughout the African continent, “the fund has forked out almost \$3.5 billion on 87 projects in 30 African countries, including Zimbabwe. When all the projects become fully operational, Chinese firms would have invested almost \$16 billion in such joint ventures.” The fact that the China-Africa Development Bank is willing to invest in Zimbabwe is somewhat significant. Zimbabwe has a complicated history, much of the world has declared the President Robert Mugabe as an unfit and corrupt ruler, guilty of human rights violations and considered a dictator and the country’s only president since the beginning. Many other multilateral organizations, such as the World Bank and IMF, have not been willing to fund projects in Zimbabwe because of Mugabe’s reputation (Shiza and Kariwo). However, the China-Africa Development Fund has been willing to invest. The future of the China-Africa Development Fund could mean big things in terms of investment and construction for the future of development and wealth in the African continent.

Who is constructing these roads?

Aside from foreign direct investment flowing from China to Tanzania in terms of financial aid, it is also important to note that Chinese companies account for 72% of the awarded construction contracts (Hopcraft). These contracts typically arise out of agreements between Chinese contracting firms, that are typically state-owned, and the Tanzania National Roads Agency (TANROADS), an Executive Agency under the Ministry of Works, Transport and Communications. In these cases where Chinese companies are awarded construction contracts, it is the Tanzanian government hiring Chinese firms to come into the country and help build roadways and other pieces of infrastructure. One of the many examples of this type of contracting occurred in December of 2013, when the TANROADS Chief Executive Officer signed contracts worth over US\$150 million to pay for Tanzanian roadways constructed by three Chinese firms. These firms involved in this specific project were the China Henan International Cooperation Company Limited (CHICO), the China Railway Seventh Group Company Limited (CRSG), and the Sichuan Road and Bridge (Group) Cooperation Limited (AllAfrica). In the case of this contract, the roadways being built in Tanzania will form part of a larger trunk route between Egypt and South Africa, thereby linking the northern part of the African continent with its southern-most country. The table below, Table two, can be used to further illustrate the role of Chinese contracting companies in Tanzanian road-building projects. This table shows the ten largest (in length (km)) completed roadwork projects in Tanzania, funded by the Government of Tanzania, since the year 2000. Of the ten largest projects included in Table two, eight of them had Chinese contractors; firms from Japan and Kuwait contracted the other two projects.

Table Two: LIST OF COMPLETED UPGRADING/REHABILITATION ROAD PROJECTS SINCE 2000 UNDER TANROADS (PROJECTS FINANCED BY GOV. OF TANZANIA) (TANROADS)

Project Name (Names of connecting cities/towns/villages)	Length (km)	Signing Date	Contract Sum (TSh in billions)	Contractor
KIGOMA-LUSAHUNGA (BALANCE WORKS)	154	Jun 18 2009	191.454	CHICO-CRSG JV
ISAKA-USHIROMBO	132	Aug 18 2009	145.44	CHICO
DODOMA-MANYONI	127	Jan 4 2003	63.888	KONOIKE
KYAMYORWA-BUZIRAYOMBO	120	Apr 1 2005	49.125	CHINA GEO-ENG.
BUZIRAYOMBO-GEITA	100	Feb 10 2005	41.14	SINOHYDRO
MBWEMKURU-MINGOYO	95	Feb 24 2003	51.488	MA KHARAFI
NANGURUKURU-MBWEMKURU	95	Feb 14 2003	39.239	CICO
MANYONI-ITIGI-CHAYA	89.3	July 30 2010	109.643	SINOHYDRO
NYANGUGE-MUSOMA (MWANZA/MARA BORDER-MUSOMA SECTION)	85.5	July 30 2010	85.369	CHICO
MWIGUMBI-MASWA-BARIADI-LAMADI (Bariadi-Lamadi)	71.8	Sept 9 2009	67.409	CCCC

*1 Tanzanian Shilling=0.00045 US Dollars.

As shown in Table two, these contracts are worth large sums of money and span long distances. The projects are named after the two points being connected by the construction project, in some cases these are cities, other times the names represent small villages, making it difficult to find a map that shows images of what exactly these roads look like. However, some of the locations on the table above are significant in terms of resource extraction, specifically for gold mining. For example, the Geita district that is home to the Geita open-pit mine owned by a

South-African based mining company is a point of connection for one of the road projects listed in Table two (Stucchi et. al.).

The Chinese contracting companies that are represented in this graph are all state-owned enterprises: CHICO, CRSG (the first project is a CHICO-CRSG joint venture), China Geo-Engineering Corporation, Sinohydro, China Chongqing International Construction Corporation (CICO), and the China Communications Construction Co., Ltd. (CCCC). CHICO, the first group, is a state-owned enterprise that contracts international engineering projects and provides a number of other services, including mining development and according to their website, “undertaking infrastructural projects aided financially by Chinese Government in oversea countries” (China Henan International Cooperation Group). It is important to highlight that the Government of Tanzania funds all of the projects listed in Table two, however there are other projects that have gone to Chinese contractors that are funded by multilateral organizations, such as the African Development Bank. Table two helps illustrate the point that contracts worth extremely high amounts of money are being awarded to Chinese contracting firms. This remains true for other construction projects funded by other means. According to TANROADS, of the nineteen completed projects between 2000 and 2015 that were financed by multilateral aid organizations, thirteen were contracted to Chinese construction companies. Of these projects contracted to Chinese contractors, seven were funded by a combination of the African Development Bank, the Government of Tanzania, and in two cases, Japan International Cooperation Agency (JICA). The International Development Association, part of the World Bank Group, financed the remaining six projects (TANROADS). This information listed in Table two also helps illustrate the various roles of Chinese actors in road-building projects in Tanzania. Chinese actors stand on both sides of construction, through funding multilateral

organizations and by working as contractors via these state-owned enterprises. According to Sutton and Olomi in their book *An Enterprise Map of Tanzania*, contracting has become a foreign-dominated ordeal:

Contracting is dominated by foreign firms. While only 3% of contractors are foreign, they execute 60% of all works by value. Chinese contractors, who entered the scene only 15 years ago, dominate the market. They now constitute 26% of all foreign contractors in terms of numbers....Chinese contractors are usually backed by Chinese financial institutions and suppliers. Non-Chinese contractors have sometimes employed Chinese foremen to inculcate Chinese culture and methods into their operations. Some Chinese employees in Chinese construction firms have partnered with locals to establish firms with majority local ownership, which allows them to gain preferential treatment in tendering (Sutton and Olomi).

The quick and recent growth of Chinese contractors is what makes this relationship particularly interesting. There is overwhelming evidence that demonstrates that the progress of these partnerships exists and that Chinese actors have contributed plenty of financial and labor resources to aid Tanzania in their development efforts, especially for the case of road building and increasing the country's available efficient infrastructure. Tanzania has a lot to gain from these improvements and developments in their own infrastructure, in terms of development and facilitating economic trade between cities. However, this still presents us with the question, what does China stand to gain from this relationship?

The Demand for Minerals: Tanzania's natural resources

Tanzania, like many of its regional neighbors, is rich in a variety of natural resources. In terms of domestic wealth, historically, mining and quarrying have contributed relatively little to the country's GDP in comparison to wealth generated by other sectors, such as farming and

agriculture (Hassan and Mungatana). However, historically speaking, mining and quarrying have in fact played an important role in Tanzania's total export earnings. As the case is in many countries with a colonial legacy, foreign resource extraction can present itself to be somewhat of an issue and in some cases can hinder economic development. Sutton and Olomi explain in *An Enterprise Map of Tanzania*, that:

The 2009 Survey of Industrial Establishments by the National Bureau of Statistics identified 38 enterprises that deal with metals and fabricated metal products; ten of these enterprises were foreign owned and nine others were jointly owned with foreign firms (Sutton and Olomi).

Statistics such as these lead one to question the ethics of resource governance and wealth. The Revenue Watch Institute is an organization that works to promote transparency and responsible management of natural resource revenues by publishing a resource governance index. This index rates resource-rich countries based on the fairness and reputation of their extraction practices. In the year 2013, Tanzania ranked 27th out of the 58 countries considered by the Revenue Watch Institute. This weak overall ranking was based on a variety of criteria set by the Institute, this includes, "insufficient reporting requirements and the lack of a freedom of information law,"; "failure to publish mining contracts and a lack of data on the state-owned mining company"; and lastly, "low scores in government effectiveness and the rule of law. It scores poorly on corruption and accountability indicators" (Revenue Watch Institute). The lack of transparency and the presence of corruption in resource management make it difficult to understand exactly how many resource reserves in Tanzania are currently being commoditized and what actors play a role in this commodification.

The gold industry is a particularly complicated case when it comes to resource governance within Tanzania. In 2012, gold became Tanzania's main export, "gold, which

contributed virtually nothing to exports 20 years ago, is now Tanzania's main export, accounting for 36% of export revenue in 2011." (Sutton and Olomi). With this gold boom, came an increase of wealth, but not necessarily where one would expect to see:

In 2000/2001, prior to the growth in minerals income, 36 per cent of Tanzanians were considered poor; this number fell slightly to 34 per cent over the following seven years.

In particular, the rural majority of Tanzania's population (where the country's gold mines are located) was most affected by the failure to reduce poverty, with 18.4 per cent of the rural population suffering food poverty and 37.6 per cent of rural Tanzanians unable to meet their basic needs. This contrasts with 7.4 per cent and 16.4 per cent, respectively in the commercial capital, Dar es Salaam (Elbra).

These numbers indicate that although Tanzania had begun to export and capitalize on their gold reserves, the people living in the rural communities that contain these gold mines did not see much in terms of reduction of poverty levels. These communities also are probably the most likely to be affected by this new industry in terms of loss of land, or change in their environment.

In order to combat the issue of foreign enterprises poaching Tanzania's mineral wealth, on March 3rd, 2017, the Ministry of Energy and Minerals of the Government of Tanzania issued a press release to declare a newly placed export ban of metallic mineral concentrates and ore (Ministry of Energy and Minerals). This press release explains that, "export of mineral concentrates and ores for metallic minerals such as gold, copper, nickel and silver has been banned with effect from 2nd March, 2017. The ban intends to make sure that mineral value addition activities are carried out within Tanzania...Mineral value addition activities will provide employment opportunities, revenues and technology transfer, hence more benefits to the nation" (Ministry of Energy and Minerals). Mineral value addition activities would include any type of processing, smelting, or refining of the metal in order to increase its value. This ban

makes it so that these activities are restricted within Tanzanian borders. However, this new order does not restrict the export of already processed, smelted, or refined metals. It is important to note that although there is the intention to perform these value addition activities domestically, the country currently does not have the infrastructure or equipment with this ability or capacity. This implies that heavy investment will need to take place in this industry in order for Tanzania to perform these activities domestically and prepare the goods for export.

This new order also does not include other metals and mineral resources such as iron, vanadium, titanium, lead, tin, zinc, petroleum, natural gas, or coal, which are also big commodities that are exported out of Tanzania.

China's Demand

The current global thought, from a western perspective, tends to associate high development with high consumption. In order to source the western-idealized lifestyle and growth taking place all over the globe, high amounts of natural resources are needed to maintain this idea of wealth. The global demand for minerals and new sources of energy increased around 2008-2009 (Kaplinsky and Morris). According to Kaplinsky and Morris, “the current boom is fuelled by a massive augmentation of demand in the very large Asian Driver economies” (Kaplinsky and Morris). As these “very large Asian Driver economies” grow, the global demand for commodities such as energy, minerals, and food crops also grows. During the time between 2000 and 2007, trade between China and Africa dramatically increased from US\$10 billion to US\$70 billion, this was also a significant time for growth in China (van Dijk). The African continent has historically always been sought out as a supplier of natural resources since colonial times. The dynamic between the imperial powers and the African colonies set a certain dynamic for resource extraction and has a legacy that can still be seen today in some cases. In terms of

energy commodities, it is the amount of unallocated reserves rather than the amount of reserves they have that makes the continent's shares so strategically important (Sutton and Olomi). In December 2016, The Australian Financial Review reported that in November of that same year, "China imported 92 million tons of iron ore, up 11 percent from the previous month" (Australian Financial Review). The demand for mineral resources in China exists, just as it does in many places of the world. An additional key factor here is that there is also the need to build positive, diplomatic trading relationships in order to gain access to unallocated reserves.

Industries that Chinese actors have taken particular interest in when it comes to Tanzania include the iron, steel, and coal industries:

The government of Tanzania recently signed a US\$3 billion coal and steel mining agreement with the Chinese mining conglomerate Sichuan Hongda Group that will offer a major opportunity in the generation of coal-fired electricity. This agreement could also lead to the development of a sizeable iron and steel industry in Tanzania (Sutton and Olomi).

Agreements like the one mentioned above are commonly found throughout sub-Saharan Africa. There are other cases where Chinese corporations make deals with the government of Tanzania, bringing in equipment and infrastructure to expand an industry, and then profit off of this partnership. Another example is the case of Tanzania Steel Pipes Limited, a Chinese-owned company that imports machinery to manufacture steel pipes, and then exports the finished product to Tanzania's neighbors (Sutton and Olomi).

Tanzania's Supply

The variety of metals and minerals specific to Tanzania include precious metals, non-metallic colored stones, base metals and mineral fuels, and a range of industrial rocks and minerals (Hassan and Mungatana).

When discussing Map two in a previous section, one of the unpaved roads mentioned ran through the Liganga area, which, “studies by the National Development Corporation indicate that the Liganga area is rich in minerals containing iron, vanadium and titanium. Reserves are estimated to be between 200 and 1,200 million mt, with reserves of 45 million mt already proven through drilling” (Sutton and Olomi). Liganga serves as an excellent example of a relatively untapped market for mining resources in Tanzania.

Who benefits?

These investments in infrastructure, specifically road building, have a wide range of benefits. However, since China and Tanzania’s relationship dates so far back, both countries have made gains through a number of different ways. When discussing the benefits coming out of these investments, it is equally as important to discuss how these benefits are distributed and among whom. Additionally, aside from the profits from the natural resource trade and construction business, it is critical to see all benefits of this partnership from another perspective. Looking past the strict financial gains, there are other reasons and theorized motivations behind China’s investments and Tanzania’s acceptance.

Trade deals and contracts: who is getting paid?

In earlier sections, there were many examples of actual projects that had been carried out in Tanzania using Chinese contractors, funded by multilateral aid organizations or the government of Tanzania itself. Table two listed ten projects funded by the government of Tanzania but it is important to discuss the progress of payments. Back in 2012, the government had still remained indebted to a lot of these foreign contractors and consultants:

Non-payment and late payments occur in both government and private-sector contracts.

The government recently admitted that contractors and consultants, both local and

foreign, are owed a total of US\$300 million in outstanding payments on public contracts (Sutton and Olomi).

Aside from outstanding payments, there seems to be other ethical issues that poorly affect these types of investments. According to Transparency International, each year roughly US\$28.6 million, about 10% of the money spent on construction-related activities, is lost to corruption (Sutton and Olomi). Although unclear where exactly this money ends up, it is daunting to think that the officials responsible for handling these large sums of money, allocated for specific projects, are instead headed towards the pocket of an individual.

Knowing that corruption occurs and affects 10% of the construction-related money, gives the sensation that at least some of the officials involved probably do not have the public's best interest at heart when pushing forward with these projects or at least have other selfish motivations. Looking back on history, China played a role in Tanzanian politics, just as the country itself was emerging. According to van Dijk, there are countries where China is building up political credit and intends to become more active" (van Dijk). This quote had referenced both Ethiopia and Tanzania. Although there is not much more discussion of what exactly this "political credit" would mean, it is important to understand that there is an aspect of this relationship that is politically charged.

Employment Opportunities

A curious component of these business relations relates to the matter of employment opportunity. There is a strong and well-established Chinese workforce in the African continent, but the size and success varies from country to country. Along with the quick increase in Chinese FDI towards the African continent, a quick increase in trade and migration also followed. There are estimates that placed the number of Chinese workers in Africa back in 2007 to be around 750,000 people. That was ten years ago, and now numbers put them around a million (Mohan et.

al.). However, in places such as Tanzania, Chinese companies have a historical presence, and therefore are more likely to understand and employ local Tanzanians (van Dijk). Estimates in 2011 placed roughly 10,000 Chinese workers in Tanzania (Mohan et. al.). An increased Chinese presence in the African continent has also affected certain societies that are now learning how to incorporate Chinese neighbors into Tanzanian civil society. In many cases there is general approval, however, in certain cases, this can become a point of tension between locals and foreign workers. For example, many of the Chinese state-owned enterprises that bring in staff from China build accommodations such as living compounds near or next to the construction site they are working on (Mohan et. al.). Not only is this sometimes perceived as favoritism, but it also segregates communities, separating the locals from the Chinese workers who come in and work on these projects.

Tanzania and China have a mix of state-owned and privately owned firms and companies working in the mining and construction industries, which has led to a whole other set of problems. In some cases, the Chinese mining and construction companies will bring in their own team of people from China as opposed to hiring locals. The number of actors working in these sectors and the differences between them can lead to confusion:

President John Magufuli came out strongly to clarify why the government decided to freeze new employment opportunities in the public service, saying the move is aimed at stamping out phantom workers in the government's payroll.... 'There have been instances where a mining company operates in the country for 10 years but its officials are telling you that they don't make any profit....if that is the case, they better go back to their countries,' he stated..... 'I understand that there are 2,800 guest workers, who were paid pensions through NMB Bank amounting to 7tn shillings (US\$3.24 billion)', said Dr.

Magufuli, directing officials to ensure the money was recovered (BBC Monitoring International Reports).

*NMB stands for the National Microfinance Bank of Tanzania

The case described above, illustrates the potential problems that can arise from having a lack of transparency within these foreign firms. Here, “guest workers” refer to foreign workers, as in non-Tanzanian people. These guest workers were receiving pensions through the National Microfinance Bank of Tanzania, which are intended to benefit local workers.

In addition to an increased number of Chinese migrants coming to work in sub-Saharan Africa, the government and the private sector have facilitated Chinese migration to the continent through various means. For example, according to Mohan et. al., “in Lujiiazhuang in Dingzhou city, Hebei province, 70 percent of the village labor force works abroad and 90 percent of those workers headed for Africa ten years ago.” In 2011, these workers sent remittances back to China worth around 50 million RMB, which translates into just over US\$7 million (Mohan et. al.). This translates into a lot of wealth leaving the African economies. Mohan also states that “there has been a significant deregulation of labor recruitment and a growth in private labor contractors in populous provinces such as Sichuan, Hubei and Henan”; Henan province is the owner of CHICO, one of the Chinese state-owned contracting companies listed in Table two. The Chinese government has facilitated the movement of workers to sub-Saharan Africa by establishing specialized-economic zones in different parts of the continent and by providing government-run websites that offer resources to make the move and transition easier. Although Chinese FDI presents itself as a great economic opportunity for Tanzania, on a smaller scale, when speaking in terms of the individual employee, it cannot necessarily be considered as a guaranteed or sustainable job opportunity.

The Question of Sustainability

From a certain perspective, Chinese FDI and economic partnerships with sub-Saharan Africa can appear to be a situation in which everyone leaves a winner. China can expand into new markets, and the country being invested in now has all of these new projects being built to promote development. However, many consider the question of sustainability: exactly how sustainable is the dynamic of this economic relationship? In other words, at what point in Tanzania going to be able to stand on its own feet. One critique of this relationship, is the concern of neocolonialism. Although Tanzania has gained a lot from Chinese investments, they have also lost in other areas. There seems to be a certain level of dependency maintained when discussing Chinese FDI in Tanzania, aside from the constant loans, Tanzania's markets have seen a growing dependence on the Chinese markets, "while the increased economic ties have resulted in increased economic growth, they have also increased Tanzania's vulnerability to downturns in China's business cycles" (World Bank Group). It is natural for a country's economy to take a hit if one of their largest trading partners is in an economic downturn, however, when two economies are so incredibly intertwined, it especially increases this risk. Another issue for economic sustainability presents itself through the need of equipment in order to process or refine goods. For example:

Scrap metal has already become valuable in Tanzania for exports, and the hope is that people will recover plastic in the future. Currently most of the plastic export bottles are compressed and exported to China! Hence, it is important that there will be a plastic recycling plant in Tanzania soon (van Dijk).

The recycling of these materials has already turned into a profitable industry, however, the value addition activities that transform these waste products into commodities occurs

mostly outside of Tanzania. This is simply another example of how China's actions can be perceived as ways the country is taking advantage of Tanzania's position.

Aside from the sustainability of this business partnership itself, Chinese FDI in Tanzania presents issues of sustainability for local economies, land ownership, and ecological well-being.

Local Economies

Although this expanding partnership that has been developing between Tanzania and China for decades has brought a lot of growth and development to both countries, it has also had some negative impacts on small-scale local economies within Tanzania. As the case is for many local craftsmen and entrepreneurs, it is difficult to compete with Chinese products, "countries like Tanzania find it difficult to compete in an international or global context, while their markets are flooded with cheap Chinese products" (van Dijk). Cheap products coming in from China may make some everyday items more affordable, but it does reduce the chances of local producers being able to compete with these cheap prices. In addition to importing cheap goods from China, locals now compete with Chinese businesses, owned by entrepreneurs that have migrated to sub-Saharan Africa and have set up shop. Along with the growing number of Chinese migrants, Chinatowns have sprung up in some of the big cities:

Dar es Salaam is the commercial center of Tanzania, one of the hubs of transportation for the East Africa coast since AD 1000, as well as the largest city. Kariakoo Ward contains a large market sprawling over many streets and hosts a concentration of Chinese businesses. Chinese traders sell hardware, construction materials, plastic ware, kitchenware, curtains, locks, and electronic appliances. Some of them also occupy apartment buildings as living quarters. Many shops selling construction materials have warehouses outside Kariakoo with customers able to pay for their goods in the Kariakoo

ship and collect them from the warehouse. Chinese restaurants can be found all over the city, including in the most affluent area, Oysterbay. There are also a number of Chinese medicine practitioners in Dar es Salaam. (Mohan et. al.).

The increase in Chinese small businesses has led to a culture clash in some places in sub-Saharan Africa, partially because of the newfound economic competition for native business owners and job seekers. More specific to the point of Chinese FDI in terms of infrastructural investments, displacement and environmental costs are also concerns for sustainability.

Who is losing land?

All across globe, not just Tanzania, people can be displaced from their homes. There are a number of reasons that cause this, but in Tanzania, many of the discussed construction projects have caused some type of displacement. The African Development Bank defines these people as a Project Affected Person (PAP), “one who, as a consequence of the project, sustains losses as a result of impact on a) land, b) structure, c) immovable asset and/or d) livelihood/incomes (African Development Bank). The African Development Bank also wrote up a resettlement action plan for one of the large-scale projects they are funding in Tanzania that runs from Dodoma, the Tanzanian capital, to Babati. The end product would run 260 km. This particular report and action plan written by the African Development Bank discusses how they plan to minimize impacts, the number of affected households, the social impacts of relocation, and the socio economic profile of the affected people. Since this is such a large-scale multilateral organization, there is some accountability that comes attached to their reputation and their name. However, it has proven to be nearly impossible to find something of this depth for any Chinese-backed project.

National Parks and Wildlife

Mining and construction are two industries with clear environmental impacts. For the case of Tanzania, a country known for its national parks and diverse wildlife, these environmental impacts could have serious consequences. Delving into controversies that attempt to compare human development and economic growth with environmental preservation is extremely complicated. In 2012, there was a controversy around building a road project titled, the Serengeti Road, with the intentions of establishing a well-connected road system in northeastern Tanzania to connect Lake Victoria with the port of Dar es Salaam. The Serengeti Road would have caused massive losses to Tanzanian economy and ecosystem. Serengeti National Park not only is a place of national pride, but brings in extremely high amounts of revenue for the nation's tourism industry:

The Serengeti Route would bisect the migration and cut the ecosystem in half. In addition to transiting through the core range of a threatened population of black rhino and the endangered wild dog, this route would fracture the migratory path of the wildebeest and zebra. . . . Evidence suggests that the knock-on effects of a degraded ecosystem in terms of reduced tourism could reduce foreign revenue, which could alter the national exchange rate and ripple through the rest of Tanzania's economy (Hopcraft).

After much discussion, it was decided to leave this particular route running through the national parks unpaved. Although there was no loss of the Serengeti Great Migration pattern, this particular case demonstrates the need for policy and legislature to protect these environmental assets.

Findings and Discussion

China's role in Tanzanian infrastructural investment is a lot more profound and takes many more forms than simply Chinese FDI. There is a strong presence of state-owned

contractors, specifically engaging in the actual building, construction, and engineering of these roads. There exists an established community of Chinese migrants who work for a lot of these state-owned contractors or who have remained in Tanzania to become entrepreneurs or small business owners. In terms of expanding to other markets and gaining access to new and unallocated mineral resource reserves, this dynamic clearly brings a lot of economic benefits to the Chinese economy. Aside from the clear benefits associated with expanding to new markets, Chinese firms have been able to build professional connections in Tanzania. These professional connections have allowed Chinese actors to expand into other industries aside from development and construction.

In terms of Tanzania's own development, their partnership with China has brought many great benefits as well. A solid transportation network, especially routes that bring commodities out towards economic centers to turn a profit, is crucial to development. Without China's help, Tanzania would not be on its path to becoming one of the most important economic hubs in east Africa. However, it is important to consider what this FDI means in terms of long-term development goals for Tanzania. For example, Tanzania still lacks much of the machinery and equipment to execute large-scale construction projects in comparison to China. The same goes for machinery and equipment to perform value-addition activities. As discussed earlier, Tanzania exports much of its scrap metal and recyclable plastics to China in order for them to be recycled and sold (van Dijk). If this process were to take place within Tanzania, the country would increase their profits on this export. The government of Tanzania is already taking steps to ensure that these value-addition activities take place within domestic borders for the cases of metallic commodities, such as gold. However, they still must acquire the equipment and skilled workforce to carry out these economic activities in order to begin to see profits. This leaves us

wondering if Tanzania has become too dependent on Chinese FDI to be able to reach their full economic potential on their own.

In terms of the motivations behind Chinese road building, based on the Tanzanian supply and the Chinese demand, it is clear that Tanzania possesses minerals that China both needs and wants for the sake of their own development. When investigating the motivations behind these relationships, the overall issue of transparency on both ends has made it difficult to establish truly clear connections. Ultimately, there needs to be more research done and disclosed to fully understand the economic impact the road building and mining industries have on local populations.

Conclusion

In comparison to reliance on traditional neoliberal aid agencies and structural adjustment programs, south-south cooperation has given the developing world new opportunities to grow and develop without accepting all of the conditionalities set forth by institutions like the World Bank and IMF. However, it is unclear if these new relationships can be completely trusted as a ‘no-strings-attached’ alternative. Responsible resource governance and the importance of a healthy distribution of resource wealth is something that remains to be seen in Tanzania. Local issues with corruption, the involvement of foreign actors, and the lack of information all seem to contribute to this issue. During colonial times, issues of responsible and just resource governance plagued the colonies. Although colonial times are over, these same dynamics seem to hold a faint legacy. In Tanzania, it may be beneficial to retain a healthy level of skepticism towards Chinese actors and involvement to ensure that western imperialism has not been replaced with Chinese neoimperialism.

Appendix One: Trunk Roads Map (TANROADS)

TRUNK ROADS NETWORK



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