

# Faculty & Research Working Paper

Chinese Investment in Africa: Avenues for Academic Scholarship

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Revised version of 2013/112/EFE

This work is fully collaborative; the listing of authors is reverse alphabetica. The authors would like to thank Dezma Dsouza for research assistance and Javier Cunat of Beijing Axis for data and advice. This paper won the overall Best Paper award for the inaugural conference of the Academy of International Business – Sub-Saharan Africa Division in Nariobi, Kenya, August, 2014; it also will appear in the Proceedings of that Conference.

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This working paper was developed using funds made available through the Abu Dhabi Education Council, whose support is gratefully acknowledged.

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#### Abstract

The significance of Chinese investment in Africa has long been a subject of international policy debate. However, business scholarship has given this important phenomenon little attention. In this paper, we seek to draw attention to the importance of this area for business research. We outline the significance of this phenomenon for business scholars in terms of possible theoretical and methodological research avenues and provide a preliminary report on a dataset we have assembled to offer insights into the geographic and economic breadth of Chinese investment in Africa.

#### Introduction

Although Chinese investment in Africa has long been a subject of policy debate (Alden, 2007; Brautigam, 2009; Michel & Beuret, 2009; Rotberg, 2008; US Senate, 2012), has received relatively little attention from business scholars. We aim to correct this oversight, not least because Chinese investment in Africa represents new and important opportunities for scholars of international business (IB), particularly those interested in political strategy, organizational theory and behavior, and the social impact of business. Of course, no single paper could possibly do justice to the panoply of research possibilities opened by this enormous flow of financial and other resources; thus, we aspire to a more modest goal. In this paper, we outline the significance of this phenomenon for business scholars in terms of possible theoretical and methodological research avenues. We also provide a preliminary report on some data we have assembled to offer insights into the geographic and economic breadth of Chinese investment in Africa in recent decades.

At the policy level, the enormity of Chinese investment in Africa cannot be understated. China's bilateral trade with Africa increased approximately 300 percent between 2006 and 2011, reaching hundreds of billions of dollars per year (The Economist, 2011; Daly, 2012). Much of this growth was due to exports; for example, in 2010 China exported \$54 billion to Africa; exports from the United States to Africa in that year amounted to \$21 billion (Kwaji, 2011). These exports have been accompanied by large investments by Chinese companies: \$20 billion compared to a World Bank commitment of \$17 billion according to (Brautigam, 2009). In addition, Chinese companies have significantly contributed to African infrastructure, including extensive road construction across the continent, construction of hospitals, railways, e.g., \$66 million rehabilitation and expansion of the TAZARA railway in Tanzania, government buildings, e.g., the \$200 million African Union Headquarters in Addis Ababa, Ethiopia, and dams in countries across the continent,

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<sup>&</sup>lt;sup>1</sup> The Economist recently sponsored a media debate with policy scholars, <a href="http://www.economist.com/debate/days/view/465">http://www.economist.com/debate/days/view/465</a>.

e.g., Ghana, Ethiopia, Mozambique, and Sudan/South Sudan. By 2012, China followed the US and the EU as Africa's third largest trade partner, and analysts projected that China would surpass both to become the largest trading partner with Africa by 2017.<sup>2</sup> Recent high profile visits by Chinese leaders underscore the importance of investments in the African continent for China; these visits support the systematic and strategic building of relations through the establishment of the Forum on China-Africa Cooperation. This exclusive forum, which alternates locations between China and various African countries, allows African leaders to meet with their Chinese counterparts and discuss policy and economic issues of importance to both.

Despite these significant contributions and the highly cooperative relations between China and the various African governments, investment by Chinese firms (and the Chinese government) on the African continent is not well understood. A range of issues, including poor quality and a lack of detail in the data that are currently available, have contributed to challenges to describing Chinese investment in Africa. Critically, the long term impact of Chinese investment in over 50 countries on the African continent is still open for debate, specifically on the question of whether this investment 'good' or 'bad' for Africa? While acknowledging the importance of this open policy question, we also observe that it is all encompassing and well beyond the scope of a single study. In this spirit, we have set a more modest goal for this paper; we hope to delineate some ways in which IB scholarship might help explore the impact and range of Chinese investment in Africa. Specifically, we try to reframe the broad policy debate in terms of questions of theory and empirical methodology relevant to IB research.

The remainder of this paper is structured as follows. We begin with a brief discussion of various theoretical lenses from IB scholarship that might provide insight into the China to

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<sup>&</sup>lt;sup>2</sup> http://chinaafricablog.com/post/33789614152/africa-to-become-chinas-largest-trading-partner-by#.UIV1yG\_R6a9

Africa phenomenon; we will also suggest that some aspects of IB scholarship might be challenged by these investments. To illustrate these points, we use our data to explore the categorization of Chinese investments in Africa. After describing our data and the methodology we use to categorize our dataset of investments, we perform some descriptive analyses to derive insights from the data on financial and other resource flows from China to Africa. To support these insights, we explore a few interesting findings from these data in more detail. We conclude with a review of some preliminary findings suggested by our data and discuss implications for future theoretical and empirical IB research addressing Chinese investment in Africa.

#### **International Business Research: A Few Key Strands**

Chinese investment in Africa can be viewed through various theoretical lenses that are common in the literature of IB research; importantly, we believe careful study of both the social and economic aspects of the relationships can advance these theories and deeper understanding of the China to Africa phenomenon. We begin with the work in IB that addresses the host country environments for foreign direct investment and continue with the discussion of the related topic of mitigating the risk of foreign investments. Next, we turn our attention to the issues of similarity and dissimilarity of national cultures to segue to our final issue, which is a discussion of how concepts related to corporate social responsibility might relate to issues of stakeholder engagement and social differences.

# Foreign direct investment and the role of governments

The study of foreign direct investment (FDI) and the multinational enterprise (MNE) is a primary focus in the field of IB. This theory of FDI takes an economic approach to the study of the MNE (Hymer, 1960), assuming that that firms internationalize because they possess advantages that may be more useful abroad than in the home market (Hymer, 1960; Vernon, 1966; Knickerbocker, 1974). For example, this literature has explored the claim that

firms move operations to countries where they can exploit their home-grown firm-specific advantages to pursue market power and firm growth driven. This occurs when MNE processes are more efficient than market transfer (Buckley, 1993; Buckley & Casson, 1976; Dunning, 1977), which is often driven by the ability of information/knowledge transfer within the organization to lower transaction costs (Kogut & Zander, 1993; Teece, 1986; Williamson, 1975). The Chinese phenomenon is particularly interesting in the context of this literature because it brings to light the role of governments in not only providing the motivation for firms to engage in foreign direct investment, but also in creating advantages for the firms in particular host country environments. The specific mechanisms of this government-driven or government-facilitated model of FDI are yet to be explored within academic scholarship. We believe that study of Chinese investment in Africa can explore questions related to the nature of the state-owned enterprises (SOE), the role these firms play in global economic integration, and some of the advantages and possible disadvantages these firms face in an increasingly global world. Study of these issues in the context of Chinese investment in Africa would afford a deeper understanding of the dynamics of the state and firm relationships in both home and host countries.

# Political risk mitigation

Political risk, the risk to a firm's investment from political actors in the host and home countries in which the firm operates, is a growing concern of IB scholars (Fagre & Wells, 1982; Henisz, 2000; Henisz & Zelner, 2005; Kobrin, 1979; Kobrin, 1987; Poynter, 1982; Vernon, 1971). The traditional source of political risk facing MNEs is the host country government, and this risk is often reflected in government nationalization and subsequent expropriation of firm assets (Vernon, 1977). The changing nature of national political environments and particularly changes in the internal distribution of political power, however, has highlighted the role of other political actors; it has become increasingly clear

that local interest groups, labor unions, civil society organizations, and diverse social grassroots movements, are now important sources of political risk for MNEs (Henisz, 2000).

No political structure is constant, and keeping abreast of political changes, both gradual changes in political structure, e.g., those that result from the election cycle, as well as those brought about by sudden, unpredicted events, e.g. coup d'états, in widely different host countries is critical for firm survival. Compounding this issue of diverse and dynamic sources of political risk is the very nature of political risk itself – political risk is socially complex, country-context specific; as a result political risk is even more difficult to hedge than financial risk. Political risk is also difficult to identify, and due to the tacit nature of any political risk mitigation strategy, effective strategies are difficult to code; thus, benchmarking to disseminate best practices, even within specific MNEs, is challenging.

For foreign firms, political strategy has been managed at the firm level often with the establishment of government relations offices. However, the Chinese model of investment offers a different means for political risk mitigation – the strategic establishment and strengthening of ties through the home country government. Here, the Forum on China-Africa Cooperation may play a significant role, suggesting that Chinese firms are backed by the immense political and financial power of the Chinese government. Such a national level strategy has important questions for business scholars including: How is this strategy established? What is the efficacy of this strategy? Is there variation in the type of firms that are supported by this strategy? What are the long-term benefits or costs of this strategy? Do Western firms investing in Africa face political risks in a less collective manner than their Chinese counterparts?

# Cultural similarity or dissimilarity

Chinese investment in African countries has important insights for scholars of culture; particularly within the field of IB, the effect of culture cannot be overlooked. For example, it

has become clear that psychic and cultural distance between the host country and the home country is an important entry mode determinant; indeed, the evidence suggests that culture influences the perceptions of costs and uncertainty among alternative modes of entry into different foreign markets (Kogut & Singh, 1988). National culture almost certainly plays a role, as suggested by the finding that national patterns exist in the propensity of firms to engage in one type of entry mode as opposed to others (Kogut & Singh, 1988). Important also to the impact of culture on investment is experiential knowledge as investing in the same country and countries with similar cultural profiles seems to result in learning (Barkema, Bell, & Pennings, 1996); there is emerging evidence that firms sequentially enter countries with cultural/psychic distance and that this is related to the risk and uncertainty of FDI.

At first blush, it seems that existing understanding of role of cultural distance may be challenged by the phenomenon of Chinese investment in Africa. China arguably has little in common, culturally, with African countries. Indeed the greatest similarity between China and many countries on the African continent is the level of economic development, as both China and many of the countries where Chinese firms are investing are considered emerging economies. Critically, the African continent is not homogeneous and comprises over 50 countries, each with different peoples, tongues, tribes and cultures. For example, Nigeria, the most populous country on the continent with almost 175 million (July 2013 est.), has over 250 ethnic groups and over 500 indigenous languages.<sup>3</sup> South Africa, the most economically developed country in Sub-Saharan Africa, has a population of almost 49 million (July 2013 est.) who speak 11 official languages, including: IsiZulu (official) 23.82%, IsiXhosa (official) 17.64%, Afrikaans (official) 13.35%, Sepedi (official) 9.39%, English (official) 8.2%, Setswana (official) 8.2%, Sesotho (official) 7.93%, Xitsonga (official) 4.44%, siSwati

<sup>&</sup>lt;sup>3</sup> https://www.cia.gov/library/publications/the-world-factbook/geos/ni.html

(official) 2.66%, Tshivenda (official) 2.28%, isiNdebele (official) 1.59%, other 0.5% (2001 census).<sup>4</sup>

The fact that Africa is not homogenous and that Chinese investors seem to be doing exceptionally well across the various countries of the continent raises questions about the importance and limitations of culture in specific contexts. Western countries have largely developed or maintained ties with African countries based on colonial history—i.e., Ghana and Nigeria with Britain, Liberia with the US, Angola with Portugal, Rwanda with Belgium. Firms from the west seem to not have been able to bridge cultural barriers across the various countries on the African continent; yet, it would seem that Chinese investors have managed to do so. Key questions for theoretical and empirical academic research include: What are the cultural limitations and cultural advantages that Chinese investors face in Africa? What factors are involved? What are the mechanisms (both strategic and/or exogenous) that they have used to overcome these cultural barriers? What are the moderators? Is there a tradeoff between investment impact in economic and cultural terms? How important is it that the investing firm be aware of the significance these issues?

# **Corporate Social Responsibility Issues**

Another set of research issues is suggested by an analogy between the investments made by Chinese investors on the African continent and those made by extractive firms as a part of their corporate social responsibility or social investment practices. Whereas extractive firms often create "islands of excellence" where their social development investments were focused only around the sites of their extractive assets, the investments made by Chinese investors seem to be more comprehensive. For example, roads are not built only around the mining sites, but are built across countries. One possible explanation for this is that it is related to the engagement and management of stakeholders, which Freeman (1984: 46)

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<sup>&</sup>lt;sup>4</sup> https://www.cia.gov/library/publications/the-world-factbook/geos/sf.html

defines as "... any group or individual who can affect or is affected by the achievement of the organization's objectives." Decades of research have highlighted the importance of stakeholders obtaining the social license to operate within an environment; however, not all stakeholders are the same, and there are distinct differences between political and socioeconomic stakeholders. Cummings and Doh (2000:88) focus on a particular group of political stakeholders that they call policy-makers, who are "... the institutional stakeholders who put in place the rules, regulations, laws, and public policies that determine acceptable [firm] behavior ..." within specific country environments. These political stakeholders comprise state actors, who include any "... person or organization that plays a role in politics and directly represents the governing power of a state and/or receives direct, obligatory direction from a state,"<sup>5</sup> including the national or sub-national executive branch, legislature, judiciary or military of a host, home or a third country. Cummings & Doh (2000: 88) contrasted state actors with socio-economic stakeholders, who include "... those institutional, organizational, and individual stakeholders who provide social issues information and social legitimacy for the corporate social actions of the firm." More generally, these actors are "... non-sovereign entities that exercise significant economic, political, social, power and influence at a national, and in some cases international, level ..." and include representatives of social or economic organizations such as a corporation, association, union, interest group, non-governmental organization, community, or other civil society entity.

This distinction is critical to the Chinese investment model, which seems to have focused on policy makers with little or no attention paid to a broader set of socioeconomic stakeholders. This may partially explain the fact that, despite the significant economic contributions and highly cooperative relations between China and the various African governments, relations with African communities has had some difficulties. Often, Chinese

<sup>&</sup>lt;sup>5</sup> National Intelligence Council, <a href="http://nonstateactorsafrica.wikispaces.com/Operational+Definitions">http://nonstateactorsafrica.wikispaces.com/Operational+Definitions</a>
<sup>6</sup> National Intelligence Council, <a href="http://nonstateactorsafrica.wikispaces.com/Operational+Definitions">http://nonstateactorsafrica.wikispaces.com/Operational+Definitions</a>

investors have been welcomed by the local people, who anticipate that the construction of roads, rehabilitation of power transmission lines, and installation of telecommunication infrastructure will improve their lives. Yet, recent media reports point to a change in these relations: in August 2012, Zambian miners killed a Chinese manager in protest of poor wages (BBC News, 2012); in a 2011 interview, a Chinese executive recounts how African attitudes have changed because of poor business practices and inferior workmanship (The Economist, 2011). These sentiments may not be entirely representative and quick action to address negative perceptions of Chinese investment may mitigate potential future adverse actions. Indeed, a recent report on a poll of global influence by Globescan, which included responses from more than 28,000 people in 27 countries, found that Chinese investors are still currently perceived favorably on balance globally and particularly in Africa. Nonetheless, developing strategies to address the growing expectations of socioeconomic stakeholders, particularly as they translate into public perception, may prove important to the continued success of Chinese investors on the African continent.

The relative dearth of direct engagement of socioeconomic stakeholders by Chinese investors and practices that exclude locals, e.g., the heavy reliance on Chinese labor for many large infrastructure projects, may thwart further growth of Chinese investment in Africa. This observation also suggests a variety of questions that may interest scholars of stakeholder engagement: What are the mechanisms by which a focus on only the top tier political establishment can provide strategic and political benefits? For what length of time can this focus, to the exclusion of broader socioeconomic stakeholders, including the common people, yield these benefits? In addition, the practice of corporate social responsibility and broader stakeholder management may be less familiar to Chinese investors than to typical investors

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<sup>&</sup>lt;sup>7</sup> Details can be found at <a href="http://www.globescan.com/">http://www.globescan.com/</a>.

from the more developed economies. This suggests another interesting research issue: How do Chinese investors approach and learn about broader stakeholder management issues?

# **Methodological Avenues**

To explore the phenomenon of Chinese investment in Africa, we provide descriptive evidence based on a dataset of that we constructed from thirteen sources, including The Collaboratory for Research on Global Projects (CRGP) at Stanford University and the Heritage Foundation. As data on Chinese investments globally is limited and the veracity of such data is often challenged, our integration of information from a variety of sources likely has yielded the most complete information on Chinese investment in Africa available for research. To do this, we identified common variables, although they often were not labeled in the same way in different datasets, that allowed us to merge data; in this way were able to eliminate duplicate entries for the same investments while assemble information about them from multiple data sources. Thus, we have organized information about investments based on data about a variety of characteristics, such as country, date, type of investment and amount of funding, along with variables of interest. We are in the process of supplementing the basic statistics used to match like investments with other information, e.g., terms of the investment agreements, that may be important to answer specific research questions.

Our current dataset comprises roughly 1,000 investments in 51 African countries from 1992 through 2013 and includes several key variables. For each investment, we have the year and more precise dates, e.g., month and year, when available, the name of the local Chinese funding entity, e.g., China Exim Bank, the Chinese contractor(s) who will implement the investment, and the local African beneficiary. Other important variables include some of the basic parameters of the agreement and the economic sector in which the agreement is

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<sup>&</sup>lt;sup>8</sup> We are currently incorporating the recently released data on Chinese investments by China Aid into our dataset and these preliminary descriptive insights do not include the ChinaAid data.

made, e.g., the health care sector. Table 1 outlines the primary variables and how they were coded in the dataset; Table 2 provides summary statistics for all numerical variables.

#### Insert Tables 1 and 2 about here.

Exploring the underlying dynamics of Chinese investment in African countries requires the creation of meaningful economic and other categories to describe the range and breadth of activities by Chinese entities on the African continent. To create these categories, we began by trying to apply existing classifications of economic sectors to describe the distribution of the various different kinds of investments. We explored the current (2012) North American Industry Classification System (NAICS), which is the standard used by US Federal statistical agencies to classify firms. We found that this classification system was limited by if focus on sorting firms and other businesses into various economically relevant sectors. Since we seek to understand the nature of the investment and not just the nature of the firm implementing the investment, we searched for a more development-focused system to classify investments in the emerging economies of Africa.

After reviewing insights from practitioners and multilateral agencies that focus on socio-economic development, we found the most relevant to be the most current revision of the International Standard Industrial Classification of All Economic Activities (ISIC Rev.4) developed by the Department of Economic and Social Affairs of the United Nations. While this proved a more relevant categorization of economic sectors for the exploration of Chinese investment projects on the African continent, this classification system was particularly limited by the separation of the construction sector as a separate "catch-all" category. Using this classification system, the bulk of China-to-Africa investments fall into this construction category, for example, the construction of a hospital falls within the same (sub)category as the construction of houses (Division 41 Construction of buildings, Group 410, Class 4100

9 http://www.census.gov/eos/www/naics/

www.un.org/esa/desa

"Construction of buildings)." Also, the classification of Division 42 "Civil engineering" includes a variety of quite distinct sectors, for example, Group 421 Class 4210, Construction of roads and railways; Group 422 Class 4220, Construction of utility projects; and Group 429 Class 4290, Construction of other civil engineering projects. While this categorization has the strength of focusing on economic development, it does not allow us to clearly separate the construction investments into different economic and social sectors.

We posit that it is important to our understanding of the nature and ultimately the impact of Chinese investment projects in African countries to separate out the different types of investments as closely as described within the data. Policy scholars have identified that strength of the Chinese investors is in their ability to construct large-scale projects, which are often the focus of their investments. By considering the construction across separate sectors and subsectors, we obtain a better understanding of the breadth of economic and social sectors and subsectors of the economy in which Chinese investors contribute. For example, ministerial buildings, hospitals, schools, dams, bridges and roads are all large-scale projects involving construction. However, beyond the fabrication of structures, these projects also contribute in different ways to specific economic sectors in the host African country. To accommodate this reality, we drew economic categories from the data itself, which allowed us to group investments according to the economic sectors to which these investments contribute. This yielded nineteen self-explanatory categories within the data, all of which are listed in the first column of Table 3, where we identify the primary economic sectors from our data.

#### Insert Table 3 about here.

Important to obtaining a clear but nuanced and (empirically) true understanding of the relationship among Chinese investors and African countries, governments and peoples requires looking beyond the primary economic categories to incorporate the secondary

economic sectors or subsectors. Again, using the data we identify several subsectors, the most interesting of which include: agricultural biofuels and agricultural food production; and various types of economic and technical cooperation including economic assistance loans and credit, emergency assistance given during natural disasters, and importantly a new strategy – the creation of Special Economic Zones within countries. Further, the energy sector, which is often the focus of policy discussions on the value of and rationale for investment in the African continent, when categorized by type of energy provides greater insight into Chinese energy investments. These include hydroelectric energy, which is a well-documented and long-term strength of the Chinese on the African continent, as well as more recent forays into the creation of solar, thermal, and hydraulic energy. Thus, we subdivided the aggregate energy category into more specific types of energy to develop greater insight into the diversity of technological expertise Chinese investors apply in various countries across the African continent. Another important sector where sub-classification is important is the transport sector, which includes aviation, ports and shipping, rail, roads, and bridges. While Chinese investors in Africa have long been active in the construction and rehabilitation of roads, rails and ports, an important new area of investment is the aviation sector. The second column of Table 3 details secondary classifications of the economic sectors in which Chinese investment occurs in African countries.

The classification of investments by economic primary and secondary sectors can also be augmented by identification of the "activity" or action taken within each subsector. The rationale underlying this variable is to identify the purposes of specific Chinese investments in each economic sector or subsector. For example, construction activities differ considerably from the provision of equipment, which differs from training. An investment in the health sector may require the construction of a hospital, the provision of health equipment, and the training of health personnel. A more nuanced understanding of the nature

of Chinese investment in African countries can be derived by exploring the range of activities that are revealed for the projects in our data base, which are listed in Table 4.

#### Insert Table 4 about here.

Since this is the first report of analyses based on these data, the remainder of this paper will provide an exploratory glimpse of Chinese investment in Africa characterized along the dimensions we have discussed. We will use this preliminary review of the data to learn more about how to categorize investments for subsequent empirical research as well as guide additional data collection and refinement. Our ultimate aim is to use these data to perform statistical analyses to test IB theories about Chinese investments in Africa.

# Descriptive insights from the Data: Geographic and Economic Dispersion

Below we outline some descriptive insights on geographic and economic dispersion of Chinese investments in Africa from our dataset of roughly 1,000 Chinese investment projects in 52 countries on the African continent. The geographic dispersion of China's investments on the African continent is impressive with direct investments taking place in 52 out of 54 countries (including South Sudan) in 2013. Figure 1 shows the value of total investment by China in Africa over the period of our dataset, 1982-2013. Of course, a tracking investments by their total value is one way to document an increase in investment. Taking a look at the total number of projects reveals that the trend is not just increased spending but an increase in the total number of projects as well, as shown in Figure 2.

# **Insert Figures 1 and 2 about here.**

Some participants in the policy debate argue that the Chinese invest in only oil and mineral producing countries; our data suggests that the Chinese investment focus is far broader, touching almost all countries on the African continent. This must be understood in the context of the wide-ranging approach that the Chinese government has fostered with respect to Africa. Importantly, the establishment of the Forum for China-Africa Cooperation

(FOCAC) in Beijing in 2000 was hosted by President Jiang Zemin, Premier Zhu Rongji, Vice President Hu Jintao and 80 Chinese ministers and attended by 44 African country representatives including the presidents of Togo, Algeria, Zambia and Tanzania. Figure 3 details the growth of investment from China in African countries from 1982 and distinctly shows the growth in investment beginning around 2000 was not simply an increase in spending and an increase in projects, but also a concerted attempt at geographic expansion. While it would be foolish to dispute that the Chinese have invested in Africa to obtain natural resources such as oil and minerals, the establishment of the FOCAC and the large number of countries that receive Chinese investment suggest that something more is occurring than a simple grab for scarce resources. Importantly, the growth of China's total investment in African countries begin its substantial increase with the start of the FOCAC; in addition, China's has engaged in a conscious effort to engage in strategic outreach across the countries on the African continent. In 2000, China's investment in Africa was limited to only 8 countries, including the oil rich Nigeria, Angola and Cameroon. By 2001, investment had spread to an additional 9 countries including the Democratic Republic of Congo, and the Republic of Congo, Equatorial Guinea, Niger, Sudan, Zambia, Lesotho, Namibia and Tanzania. By 2003, with the next FOCAC, Chinese investment spread across 30 countries on the African continent, and by 2006, Chinese investors were operating in 47 African countries. By 2013, our date include investments by the Chinese in all but 3 countries on the African continent.

#### Insert Figure 3 about here.

An important insight gained from our data on Chinese investment in African countries is the distribution of this investment by economic sector. China's focus on the energy sector is widely known and well documented in policy debates and news reportage, and our data reflect this strong focus on energy with over \$140 billon USD invested. However, as detailed

in Figure 4, our data also reflect a focus on a variety of other important economic sectors. While it might be argued that some of these, for example transportation, are related to a grab for mineral exports, the facts suggest that Chinese transportation investments include significant amounts of road and rail construction as part of general national infrastructure building; there are also large Chinese investments in the information and communication sectors. To consider whether our data are consistent with a pure energy grab as the explanation for Chinese investments, we examine only investments related to energy in Figure 5. This rendering of the data reveals considerable diversification of Chinese energy investments in Africa. While the level of investments in the oil sector is large, there is also considerable investment in the energy sector that is unrelated to meeting the demands of the growing Chinese domestic economy. In particular, there are large and frequent investments in both solar and hydro energy projects.

# **Insert Figures 4 and 5 about here**

The distribution of investment by subsector provides more detail as to the breadth and changes in focus of Chinese investments across the continent. The early focus of investment, in the 1980s, was on energy, particularly large hydroelectric energy projects; investments in health, agriculture, housing, business development, transportation, specifically ports and shipping, and water sectors began in the mid-1990s. These early investments ranged across multiple sectors, perhaps as a way of testing the waters. Consistent with this, we find that the amount of time from initial investment to sustained levels of investment varied greatly be sector. For example, while the first investment in the health sector was implemented in 1990, consistent investment in the health sector began only in 2003, 13 years later. Similarly, initial investment in the ports and shipping sector began in 1997, but only became consistent in the year 2004, almost eight years later. These different temporal patterns in the consistency of Chinese investment by sector want for an explanation; consistent with our prior discussion

about the IB perspective, one might consider the relationship between the temporal pattern of investments in a sector and international political policy. Moving from the nation state level to the organizational level, one might consider the relationship between the capabilities of specific Chinese entities, private and public, and these different time patterns of investment in various economic sectors.

It is also clear that the sectors that account for the largest portion of Chinese investments changed over time. In the year 2000, energy (electricity and oil), the transport sector (roads), and housing and public works were the focus. Investment in economic cooperation began in earnest in 2002, and this focus was strengthened in 2006 with the introduction of the Special Economic Zones in various countries. Entry by Chinese investors in other sectors followed more recently, in 2004 in the aviation industry, in 2006 in national defense/military, and in 2009 in the manufacturing sectors. We interpret this pattern to suggest a shift from an almost singular focus on the basic infrastructures of energy and mining in the 1990s to many other types of investment, e.g., most recently manufacturing, by 2013. This most recent shift might be a lead indicator of a very important trend as China, which had become the manufacturing hub of the world, begins to move manufacturing to Africa. These speculations suggest some of the important issues that scholars might address by studying Chinese investment in Africa; it seems clear that the scope and amount of these investments is changing Africa in ways that have clearly have strategic and competitive implications for global business.

The importance of understanding the ongoing dynamics of Chinese investment in Africa is also underscored by its continued growth. Championed by the government, the size and scope, both economic and geographic, of this investment has grown tremendously. This has significant for the MNEs from the developed economies, who may who find themselves increasingly excluded from investments in natural resources and other economic sectors.

Further, the strengthening of political ties between China and African governments may be due to the breadth of investment not only in the natural resources sector but also in areas such as information technology and defense. In general, China observes a policy of non-interference in host country political affairs, which may help in strengthening its investment relationships across Africa. At the same time, it seems obvious that the economic benefit across broad economic sectors in various African countries will undoubtedly play a role in establishing and strengthening political ties between China and African governments.

#### **Discussion and Future Research**

The perspectives of international political relations and trade have dominated most discussions of Chinese investment in Africa; even filmmakers have entered the fray --- witness the 2010 production When China Met Africa, a prize-winning British documentary that was an invited selection at several film festivals. Acknowledging the success of Chinese investors and Africa's potential, Western governments have begun to explore investment strategies akin to the government-driven model employed by Chinese investors. Specifically, on June 30, 2013, during his 3-country African tour, President Obama announced a \$7 billion initiative funded over five years to double access to electrical power in sub-Saharan Africa. This initiative will leverage the US private sector firms, e.g., General Electric, in cooperation with various US government agencies, including the Overseas Private Investment Corp, which will provide insurance to manage/hedge the political risks, and the U.S. Export-Import Bank, which will provide financing. Importantly, President Obama also announced plans to hold a summit of sub-Saharan African leaders in Washington in 2014, suggesting the desire to implement a political engagement strategy similar to the FOCAC instituted by Chinese leaders in 2000.

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 $<sup>^{11} \</sup>underline{\text{http://www.whitehouse.gov/the-press-office/2013/06/30/fact-sheet-power-africa} \\$ 

Ironically, neither business academics in general nor IB scholars specifically have been active participants in the discussion of this incredibly important phenomenon. In hopes of changing this, we have suggested some theoretical questions from the IB literature that may be enhanced by the study of Chinese investment in Africa and a methodological categorization of data on these investments that may clarify the breadth and scope of these investment across the African continent in hopes of changing. Sino-African bilateral trade has surpassed aid provided by the World Development Bank to Africa and trade with the US and the EU. As investment and trade between China and African governments continues to increase, it is important for business scholars to pay attention. At a minimum, business scholarship on Chinese investment in Africa can help policy makers and business practitioners to understand relations between China and African countries and the significant competitive implications of strategic change in the investment areas and locations of investments in Africa by Chinese businesses and government entities.

Many fruitful areas of research are possible within this sphere, well beyond those that we mentioned — the role of the government in foreign direct investment, political risk mitigation, and stakeholder engagement. Some additional avenues of research seem obviously relevant to IB scholars, including questions of industry dominance and industry dynamics. For example, empirical examination of first mover advantages by Chinese investors might shed light on on the growth and dynamics of the investment in Africa. Another question might leverage the scope of Chinese investment by considering its influence on local businesses presents a key question: How does such large scale investment encourage or stymie the growth and development of specific local sectors of the economy in these developing African countries?

By understanding the nature of Chinese investment on the African continent, subsequent research can explore and create models to test (and if necessary, expand) models

from the literatures of IB and global strategy. The Chinese seem to have approached investment in Africa based on a unique understanding of and approach to the African business environment. Perhaps empirical research can reveal how this understanding has been developed and impelemented. The success of Chinese investors also seems to rest on an ability to manage relations and expectations with African governments and the key players in the countries where they invest. Study of this success from a business perspective may provide insights on best practice for investing or operating not just in Africa, but even developing country environments more generally. Current discourse in policy circles is woefully short on data, facts, and research. While the leaders of these debates often have reasons to emphasize the feasibility of a "win-win" nature of the partnership between China and African countries, well done research can be an important addition. The right data, that appropriately adapts existing categorizations of the data, offers the opportunity to test the boundary conditions on the creation of financial and socio-economic benefits from Chinese investments in a variety of economic sectors and locations in Africa. Clearly, better understanding of Chinese business models has significant policy implications. By gaining a better understanding of Chinese business models, governments and multilateral organizations can create more effective policies that achieve win-win outcomes for both Chinese investors and African communities. Further, governments and multilateral actors, e.g., the World Bank, should also seek to understand the growing relations between many African countries and China, including better information on how African governments manage their relationships with Chinese firms and the Chinese government. Chinese investment in Africa is an important global phenomenon, touching on a variety of important policy issues, including sustainability and the costs and challenges of this approach to investing, especially in terms of the socio-economic impact of this investment on African countries. Business scholarship has significant opportunities to understand and impact the practice and outcomes

of strategic investment in emerging economies through research on Chinese investment in Africa.

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Table 1: Primary Variables Coded in Database

Month	Month of investment event	
Year	Year of event	
Agreement Date	Date on which the agreement or contract was signed	
Date Description	Note if the given date is when the investment was announced or commenced or completed or it was reinvestment	
Country	African country	
Chinese Entity/Investor	Chinese firm or entity	
Local Partner/Beneficiary	Local partner or local beneficiary	
Firm	1 if local partner is a firm, 0 otherwise	
Total Chinese Financing Commitments	Funding amount in the agreement or contract	
Mn/bn/thousand	Millions or billions or thousands	
Total Project Cost	The actual cost of the project	
Mn/bn/thousand	Millions or billions or thousands	
Funding Type	Type of funding agreement - loan, donation, grant etc., as stated	
Terms	Note any terms of the funding	
Human/Social	If human development, e.g., training or jobs	
Purpose	The reason for the agreement/grant/loan etc.	
Status	Note of the project is complete or under construction	
Sector	Name of the industry as stated	
Sub Sector	The sub-sector of the main industry	
Megaproject	1 if grant/loan/agreement is for more than 1 project, 0 otherwise	
Diplomacy	1 if the event is purely diplomatic, 0 otherwise	
Chinese Project Sponsor	The local Chinese contractor working on the project	
Sponsor Comments	Any additional information about the Chinese project sponsor	
Capacity	Note the size or capacity of the project.	
Capacity Type  Natural Resource/Political Consideration	The unit of measurement for the size or capacity. Eg. Kms, sq mts, cubic meters, KW/MW, phone lines, users etc.  Note the natural resource used in the project or if it's a political agreement	
Natural resource description	Any additional information about the Natural resource or political agreement	

Table 2: Summary Table of Numerical Variables

Variable	Observations	Mean	Std. Dev.	Min	Max
Project ID	999	492.81	286.92	1	990
Year	935	2007	3.57	1982	2013
Country	999	28.59	15.97806	1	52
Chinese Investment	634	599.71	1,317.50	0	15,000.00
Project Costs Multiple Country	269	586.22	1,308.19	1	8300.00
Projects	999	0.07	0.26	0	1
Investment by Country Project Costs by	1002	19,921.69	26,556.69	0	94,764.35
Country No. of Projects by	1002	10,464.28	21,676.85	0	76,945.00
Country	1002	41.50	26.55	1	94
Investment by Year	1002	36,025.48	29,306.00	0	91,106.44
Project Costs by Year	1002	16,592.85	19,315.45	0	59,557.81
No. of Projects by Year	1002	87.05	35.39	1	150
Economic Sector Investment by Economic	999	9.64	4.44	1	17
Sector Project Costs by	1002	64,415.55	53,208.11	0	138,742.60
Economic Sector No. of Projects by	1002	36,378.53	39,339.69	0	92,253.83
Economic Sector	1002	153.07	99.68	3	285
Economic Subsectors Investment by Economic	999	41.69	31.02	1	90
Subsector Project Costs by	1002	16,735.70	19,309.11	0	74,411.70
Economic Subsector No. of Projects by	1002	12,645.43	20,537.49	0	55,522.08
Economic Subsector	1002	59.10	47.57	1	138
Year-Country ID	935	163.03	94.93	1	319
Country investment by year	1002	3,008.85	6,553.95	0	29,622.20
Country project costs by year	1002	2,945.71	7,831.11	0	38,988.00
Country project counts by year	1002	10.10	16.52	1	67

Table 3: Primary and Secondary Economic Subsectors

<b>Primary Economic Sector</b>	Secondary Economic Sector		
Administration & HR	- None		
Development			
Agriculture	- General/Food production		
	- Biofuel		
Defence/Military	- None		
	- Economic & Technical Cooperation		
Economic & Technical	- Economic Assistance Loan/Credit		
Cooperation/Assistance/Trade	- Emergency Assistance		
	- Special Economic Zone		
Education	- None		
Enorgy	- By Fuel type: Coal, Gas, Thermal, Electricity, Hydro,		
Energy	Natural Gas, Oil, Solar		
Finance/Business Development	- Banking		
Thiance/Business Development	- Business Development		
Health	- None		
	- General Infrastructure		
Housing/Public Works	- Housing		
	- Real Estate		
Information/Communication	- Radio/TV		
mormation/Communication	- Telecom		
Manufacturing	- By type: Cement, Fertilizer, Leather, Vehicles		
	- By type of mineral/metal: Aluminum, Asphalite,		
Minerals/Mining	Bauxite, Chromium, Coal, Iron, Copper, Cobalt, Gold,		
	Silver, Manganese, Nickel, Steel, Titanium, Uranium		
Multi-sector	- Projects bridging multiple sectors, e.g., Communication,		
	Education, Energy, Housing, Transport-Roads, Water		
Sports/Tourism	- None		
Transport	- By Type: Aviation, Ports/Shipping, Rail, Roads		
Unknown	- Projects with no sectors detailed		
Water	- None		

Table 4: List of Activities

# Activity

Acquisition/JV

Agreement

**Biofuel Production** 

Build/Install System

Construction

Development

**Equipment Supply** 

**Establish Institution** 

Expand/Rehabilitate/Upgrade

Exploration

Finance/Loan

**Food Production** 

Hold Forum

Multisector Agreement

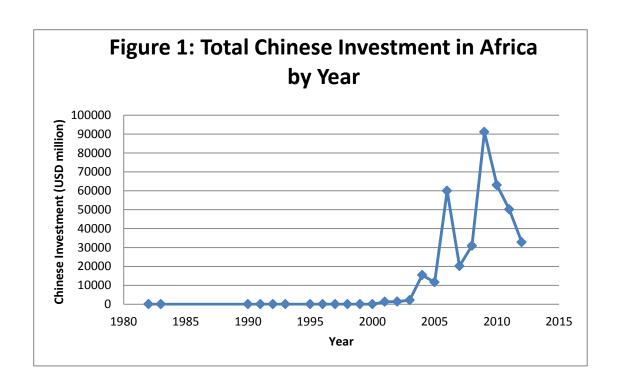
**Technical Support** 

**Technology Transfer** 

Training

Vehicle Assembly

We also consider multiple activities such as, Build/Install System & Equipment Supply & Training, which demonstrate a move to even more comprehensive project development and management.



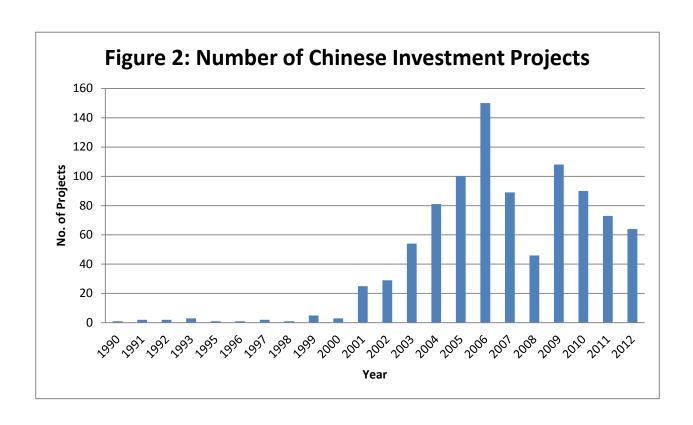


Figure 3: Geographic Dispersion of Chinese Investment in Africa by Year

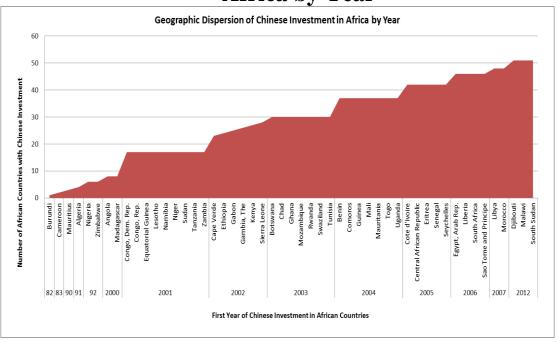


Figure 4: Chinese Investment in Africa by Economic Sector

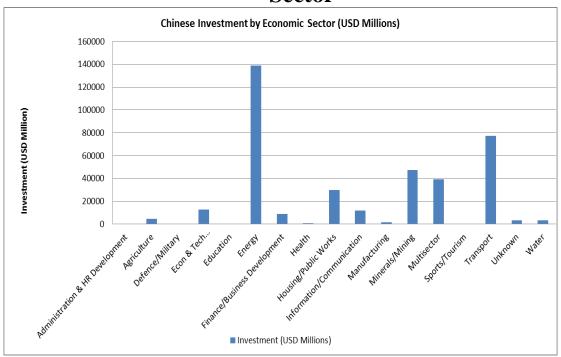
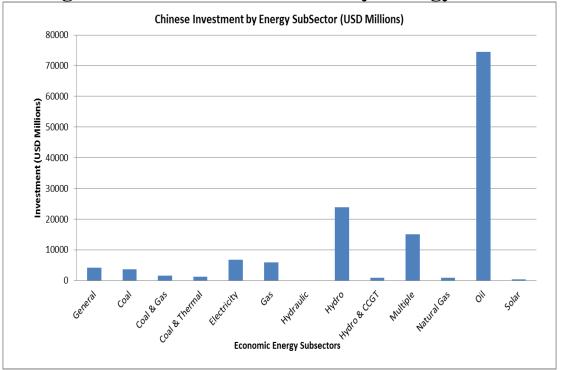


Figure 5: Chinese Investment by Energy Subsector



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