

Does Chinese Outward Direct Investment (ODI) to Africa stimulate The Sino-African Trade Co-operation?

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ABSTRACT

The Chinese Outward Direct Investment has expanded exponentially over the past years affecting the intensity of trade ties and the presence of China's contracted projects with high level of significance in volume and diversity across the African Continent. The purpose of this study is to assess and examine 24 Countries in Sub-Sahara Africa during the period 2003 to 2013(10 years) to investigate whether or not the Chinese Outward Direct Investment to Africa stimulate the Sino- African Trade cooperation with a clarity showing the rigidity which both parties have to balance to enforce the win-win benefit. For data analyses, the study adopts a panel data to analyze Chinese ODI exports to Africa, and a time series data to investigate the effect of its imports from Africa. The study reveals that Chinese Outward Direct Investment to Africa has contributed significantly and paying off as it has plays a vital role in increasing Chinese exports to Africa as well as imports from Africa especially in the oil and other raw materials imports and manufactured goods. The research found also that per capita income and annual percentage growth of domestic product of China have a positive effect on its import. Macroeconomic Policy makers and regulators would use the research finding recommendations as a proxy for sound Policy implementation that strengthen and enhance China's Outward Direct Investment and trade co-operation with SSA for a win-win benefit to attain a sustainable growth and development.

Key Words: China, Chinese Outward Direct Investment, Trade co-operation, Sub-Sahara Africa,

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1.0 Introduction

It's a gospel truth that over a decade now, China's recent growing presence in Africa is a reflection of its broader emergence as a global power; as it has become a major economic partner of the African Continent. The Sino-Africa investment has rapidly expanded over the past three decades which has however displayed a remarkable amount of diversity across the African Continent over time recording a Chinese Outward Direct Investment (ODI) flows amounted to US\$30 billion in 2014 from \$200 million in 2000 to with plans of scaling up to US\$100 billion by 2020, turning China into the largest developing country investor in Africa⁵.

The People's Republic of China's economic policies especially in the area of ODI to Africa over decades of increased economic growth on both sides have attracted growing interest from academic scholars, researchers and policymakers that have done diversify studies on the Sino-Africa economic growth with a focus on China's ability to dispense Investment to Africa, and its geometric increase in international reserves. China's expanded trade surplus and investment portfolio accumulation of international reserves created the pre-requisite for China to emerge as a global capital provider. China's doesn't only provide to the industrialized world as in the case of the \$844 billion investment in the US treasury bills as of June 2010 but also extend such facility to Sub-Sahara Africa that are traditionally considered to be risky and not usually favored by Western investors purposely to liberate the Continent from poverty, prevailing human livelihood and socio-economic challenges. During the last FOCAC meeting in South Africa in December, 2015 President Xi reassured the African Continent and its people about China's commitment and pledge a sum amount of \$60 billion non interest loan with a 10-point African development plan to ensure the success of the projects to be implemented in Africa covering the areas of "industrialization, agricultural modernization, infrastructure, financial services, green development, trade and investment facilitation, poverty reduction and public welfare, public health, people-to-people exchanges, and peace and security". The purpose of this study is to assess and examine the twenty-four(24) Countries in Sub-Sahara Africa region to know whether Chinese outward Direct Investment to Africa stimulate the Sino- African Trade by clearly showing the rigidity which China and SSA have to balance to enforce the win-win co-operation.

The twenty-four (24) Sub-Saharan Africa Countries selected includes 6 Countries from each regional Bloc from SSA - The Southern Africa Development Community (SADC), Eastern Africa Community (EAC), the Economic Community of West African States (ECOWAS) and the Economic Community of Central African States (ECCAS) respectively. The Countries are; Angola, Benin, Botswana, Cameroon, Cape Verde, Central African Republic, Congo Republic, Cote D'Ivoire, DR Congo, Ethiopia, Gabon, Ghana, Kenya, Lesotho, Madagascar, Mauritius, Tanzania, Namibia, Nigeria, Sierra Leone, South Africa, Swaziland, Zambia and Zimbabwe.

China's on-going process of internationalizing and opening up its economy with a rise in the role played in the global economy platform arena has made them to be examined thoroughly as in the case of the global payments imbalances

⁵ UNCTAD, 2013; MOFCOM

and the valuation of the Chinese currency, renminbi indicates that the stock of China's Outward Direct Investment (ODI) has experienced a remarkable growth since the 1990s. The increase is quite phenomenal in the new millennium; especially after 2002 when China initiated its "Going Global" policy to promote its overseas investment activity. Between 2003 and 2009, China's ODI rose almost seven times, from \$33 billion to \$230 billion.

China's investment relationship with Africa is important for both trading partners. For China, Africa represents a growing source of raw materials most importantly; crude oil, iron ore/concentrates, and copper which have helped fuel China's rapid infrastructure development. In Africa, China represents a major trading partner and investor that provides it with cheap consumer products, buys its natural resources, and helps build its infrastructure. This briefing describes China's trade and investment in Africa's major raw material markets, and addresses the roles that Chinese State-owned Enterprises (SOEs) and special economic zones have played in this relationship.

It is perceived that China's overseas investment activity has reached a level that could challenge international investment norms and affect international relations (Rosen and Hanemann, 2009). Indeed, the 2010 United Nations survey reported that China is ranked as the second most promising global investor⁶. Also, the geographical composition of China's global investments has evolved over time. China's investments in Africa have gone up quite substantially both in absolute terms and as a share of its total ODI. In fact, Africa has become the third largest recipient of China's ODI in recent years (Besada et al. 2008). According to the 2009 China Commerce Yearbook, China's ODI in Africa relative to its total ODI increased from 2.6% in 2003 to 9.8% in 2008. Indeed, the 2007 United Nations report⁷ points out that China is one of the major capital providers for developing countries in Africa. The substantial increase of China's ODI in Africa in the last few years has led to some debate. While some commentators laud China's growing engagement in Africa, others question the motives underlying these investment activities and their implications for Africa's political and economic development⁸. For instance, worries have been raised that Chinese investment could crowd out the African manufacturing industry, causing unemployment. Such a hollowing effect could adversely affect Africa's medium- and long-term development prospects and its ability to service debts. The number of high-quality jobs created by Chinese investment is perceived to be quite limited since Chinese firms tend to bring along their own workers. Some other concerns include the possible negative impact of China's ODI on the environment, governance, and political reforms in Africa. Yet, the benefits that China's ODI brings to Africa may be enormous (International Monetary Fund, 2010; UNECA, 2010; UNCTAD, 2010b). The African continent is historically underinvested and underserved by international investors. Chinese capital offers a valuable alternative source of financing to develop the African economy. Arguably, China has played a positive role in improving infrastructures, increasing productivity, boosting exports, and raising the living standards of millions of Africans. Sometimes, China's ODI is credited for diversifying economic activity and creating jobs in manufacturing, mining, processing trade, and construction. Although

⁶ UNCTAD, 2010a

⁷ UNCTAD, 2007

⁸ Brookes, 2007; Wang and Bio-Tchané, 2008

China's activities in Africa have received attention in policy and academic publications (Besada et al., 2008; Broadman, 2007; Cheung and Qian, 2009b; Goldstein et al., 2006; Li, 2007, and Wang, 2007), formal econometric analyses of the factors that drive China's ODI in Africa are lacking. In the current exercise, we investigate the determinants of China's ODI in Africa and shed some light on their implications. In addition to some canonical determinants, including the market seeking motive and risk factor, we incorporate some China-specific determinants such as China's trade with Africa, China's contracted engineering projects in Africa, and the well-known "Going Global" policy. In view of the hyped discussion about China's quest for African natural resources, we also investigate the resources seeking motive using African data on energy and minerals output (Brookes, 2007; Downs, 2007; Frynas and Paulo, 2006). We consider two sets of China's ODI data. The first one contains data on China's outward overseas direct investment approved by the Chinese authorities. The sample period is from 2003 to 2013.

According to Zhang Ming, vice-minister of foreign affairs, speaks during the China-Africa Relations Roundtable conference in Johannesburg on December, 2015, he said "Despite the fact that China and Africa implementing different development agenda's, the coming together of the 2.4 billion people in China and Africa presents an enormous resource and market advantage that is greater than the mere sum of individual strengths. Africa is working on accelerating industrial revolution and modernization. China, on the other hand, is deepening reforms from being an export-oriented economy to domestic Consumption while at the same time relocating its competitive industries and surplus production capacity overseas.

Notwithstanding the fact China being the world's largest developing nation with Africa being the home to richly endowed natural resources as in the case of Sierra Leone, South Africa, Nigeria, Ghana, Zimbabwe and South Sudan, etc. cannot overemphasize the need to scale up efforts in ensuring a surge in infrastructural growth, human resource development and other socio-economic development. Albeit the gains made, Africa is still fraught with difficulties and challenges, especially in investment in areas such as inadequate infrastructure, lack of quality human capital, broken health system, lack of food sufficiency and liquidity shortages amongst others.

Africa is a big Continent with diversity constituting many countries, rather than the monolithic view of the Continent often portrayed in the popular press. Given this cross-country diversity, economically and culturally diverse, with different regional economic blocs it is not surprising that Chinese engagement in Africa has varied from country to country.

Table 1: List of Selected Countries in SSA

LIST OF COUNTRIES SERIAL NO.	COUNTRIES	REGION	Resource Rich	Oil Exporters	Fragile	Low Income	Middle Income
1	South Africa ₁	SOUTH AFRICA	Yes				Yes
2	Nigeria ₁	WEST AFRICA	Yes	Yes			Yes
3	Angola ₁	CENTRAL AFRICA	Yes	Yes	Yes		Yes
4	Ghana ₂	WEST AFRICA					Yes
5	Kenya ₁	EAST AFRICA				Yes	
6	Tanzania ₂	EAST AFRICA				Yes	
7	Benin ₃	WEST AFRICA				Yes	
8	Ethiopia ₃	EAST AFRICA				Yes	
9	Cameroon ₂	CENTRAL AFRICA	Yes	Yes			Yes
10	Cote D'Ivoire ₄	WEST AFRICA	Yes		Yes		Yes
11	Congo Dem Rep. ₃	CENTRAL AFRICA	Yes		Yes	Yes	
12	Congo ₄	CENTRAL AFRICA	Yes	Yes	Yes		Yes
13	Zambia ₆	EAST AFRICA	Yes				Yes
14	Mauritius ₄	EAST AFRICA					Yes
15	Madagascar ₅	EAST AFRICA				Yes	
16	Namibia ₂	SOUTH AFRICA	Yes				Yes
17	Gabon ₅	CENTRAL AFRICA	Yes	Yes			Yes
18	Zimbabwe ₃	SOUTH AFRICA			Yes	Yes	
19	Sierra Leone ₅	WEST AFRICA			Yes	Yes	
20	Botswana ₄	SOUTH AFRICA	Yes				Yes
21	Lesotho ₅	SOUTH AFRICA					Yes
22	Cape Verde ₆	WEST AFRICA					Yes
23	Swaziland ₆	SOUTH AFRICA				Yes	
24	Central African Republic ₆	CENTRAL AFRICA			Yes	Yes	

China's economic activities have resulted in an overall increase of not only trade but also the ODI to Africa. In principle, this should have positive effects. An expansion of international trade with a new partner like China could boost growth rates by increasing demand for African products (mainly raw materials). Also, the diversification of Africa's traditional trading partners could reduce export volatility, thereby decreasing output volatility and thus boosting long-run growth rates (Hnatkovska and Loayza, 2004). Albeit, various factors have contributed to Africa's better growth performance, including a marked improvement in institutions and infrastructure and a decrease in conflicts and macroeconomic distortions⁹, all of which have to be controlled for in an empirical investigation. Though the topic on Chinese ODI stimulating Sino-Africa trade relations has received considerable attention in the media, there have been relatively few systematic studies documenting the determinants of these relations. Most studies have focused on documenting the expansion of economic ODI relations or assessing the impact of these relations rather than looking at why these relations have been growing. For example, Wang (2007) argues that the Forum on China-Africa Cooperation (FOCAC) in 2000 and 2006 were watershed moments. At the 2000 FOCAC, China pledged to write off over \$1.3 billion in debt owed by African countries. This debt relief figure was matched at the 2006 FOCAC. Several studies have examined FDI as determinant of trade, which can be seen as complementary to trade in the case of Chinese investment in Africa. Gu (2009) finds that local market access is a key determinant of Chinese FDI, with a survey of 80 Chinese firms indicating that access to local markets was the top motivating factor in their investment decision. There is also some evidence of tariff-jumping FDI, as Sanlippo (2010) finds that Chinese investment is higher in countries that are members of the African Growth and Opportunity Act (AGOA), a trade agreement with the United States. We see further evidence of Chinese firms investing in Africa to take advantage of African access to third-country markets with the end of the Multi Fibre Arrangement (MFA), a system of textile tariffs notably limiting Chinese textile exports, in 2005. Besada, Wang, and Whalley (2008) find that when the MFA expired, many Chinese textile firms operating in African countries with preferential access to developed country textile markets shut down their operations and moved back to China.

The novelty of my study is to assess and examine 24 Countries in Sub-Sahara Africa during the period 2003 to 2013(10 years) to know whether Chinese Outward Direct Investment to Africa stimulate the Sino- African Trade with a clarity showing the rigidity which both parties have to balance to enforce the win-win co-operation finding an answer to the research question ***"Does Chinese Outward Direct Investment (ODI) to Africa stimulate The Sino-African Trade?"***.

The main Objective of the study is to assess and examine whether Chinese ODI to Africa stimulate The Sino-African Trade Co-operation. Notwithstanding the main objective, there are other sub-objectives to clearly define Chinese ODI to Africa such as;

- What explains China's export and ODI to Africa and its effect on trade
- What also explains the effect of Chinese imports from Africa

⁹ OECD et al., 2013; UNECA, 2013

- To achieve the objective that Chinese ODI to Africa, annual growth rate of GDP and per capita income and credit available to domestic sector in each of the host country
- Assesses and identify factors that pose challenges on the investment relations between Africa and China, and their implications.
- Putting forward policy recommendations for implementation from the research findings as a proxy for policy implication by regulators/Authorities.

The theoretical assumption of the research is that China's Outward Direct Investment (ODI) to Africa, Gross Domestic Product annual growth rate, per capita income and the availability of Credit to the domestic sector in the selected 24 SSA Countries is directly proportional to China's export to Africa indicating a positive trajectory effect supported in the literature by Buckley et al. (2002), Sun (1999), Zhang and Song (2000) and Jinping and Wenjun (2008). Similarly, real exchange rate and military expenditure are expected to have an inverse relationship ramification on China's export to the sample of African Countries selected. There is a rise of the relative price of commodities in China to those of Africa as a result of the real appreciation of Chinese yuan by the monetary Authorities. A large proportion of the budget reserved for defense expenditures may imply future uncertainty which means the country is politically unstable; this will have a negative effect on Chinese exports to SSA Countries.

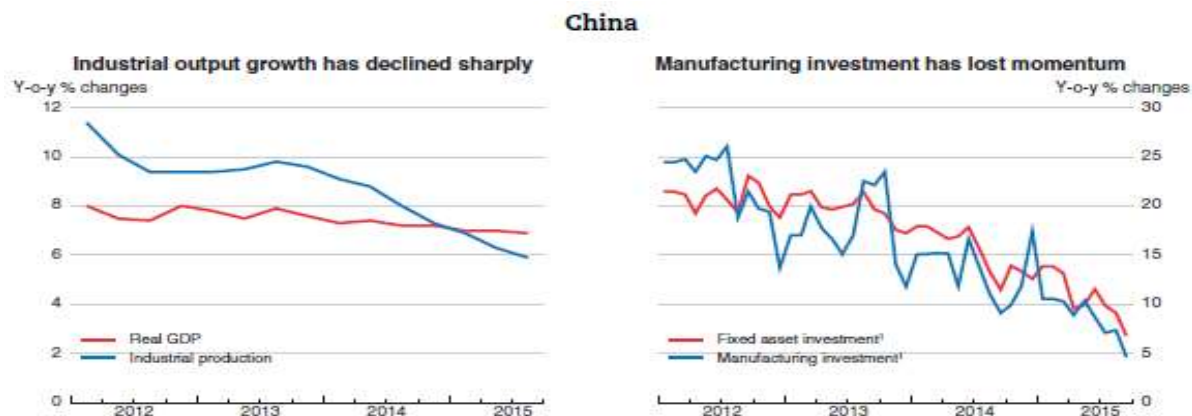
The Structure of China Economic Outlook

During the first quarter of 2016, China recorded a GDP of about 6.7% and economic growth is projected to decline gradually to 6.2% by 2017.¹⁰ The announced infrastructure stimulus measures will help overall investment, but adjustment in several heavy industries is set to continue and this stimulus is not sustainable in the longer term. Real estate investment is bottoming out, but working off housing inventories will take some more time. Consumption is set to remain robust. Food and services prices are rising, but the absence of price pressures in other areas will keep consumer price inflation low.

Monetary and fiscal policies should accommodate the ongoing re-balancing of the economy, which will lead to more sustainable and inclusive growth. Spending should be targeted at areas that promote long-term inclusive growth, such as extending the social safety net, upgrading skills and ensuring equal access to public services. Pension reform should be stepped up to safeguard fiscal sustainability.

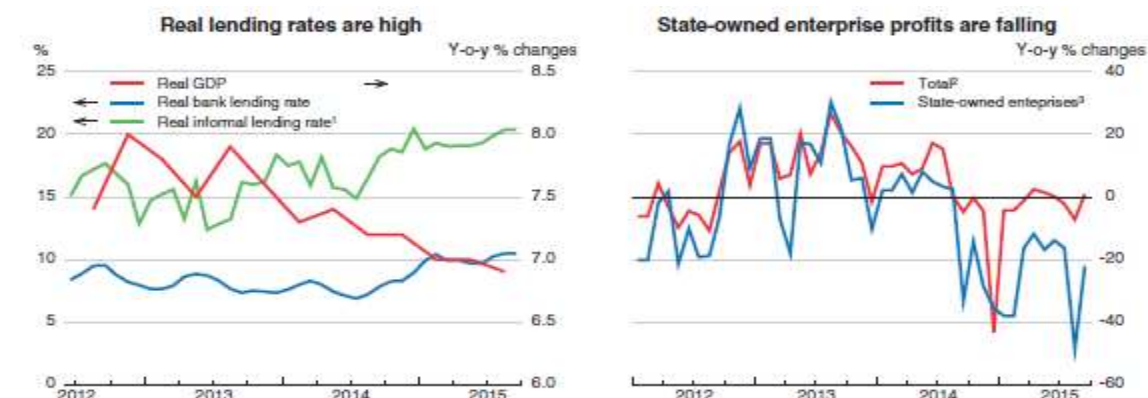
Meeting the commitment to increase the share of non-fossil fuels in primary energy consumption to about 20% and to have carbon emissions peak by 2030 will be aided by weakening growth and restructuring of the economy. A national cap-and-trade carbon emissions system, to be rolled out from 2017, can meaningfully reduce emissions only if it raises the cost of polluting sufficiently for the polluter to cut output, switch to new technology or reduce emissions in other ways.

¹⁰ China Chamber of commerce, March 2016

Figure 2: China Industrial output & Manufacturing Investment¹¹

1. Fixed asset investment and manufacturing investment refer to nominal values and do not include investment by rural households.
Source: CEIC.

StatLink <http://dx.doi.org/10.1787/888933296102>

Figure 3: Real Lending Rate & State Owned Enterprise¹²

1. The informal lending rate refers to lending by private informal institutions in Wenzhou. The interest rates are deflated with the producer price index.
2. Total refers to industrial enterprises.
3. State-owned enterprises only include industrial enterprises.
Source: CEIC.

StatLink <http://dx.doi.org/10.1787/888933296119>

Source: CEIC

The Structure of Africa Economic Outlook

Despite the Ebola virus that invaded the fabrics of Africa in December, 2013 that lasted for about 2 years, Africa's Gross domestic product (GDP) growth rate recorded 4.3% in 2015 indicating a growth strength though a bit lower than as expected and GDP is forecasted to be 5% in 2016 after subduing expansion in 2013 (3.5%) and 2014 (3.9%). The 2014 growth was about one percentage point lower than predicted in last year's African Economic Outlook, as the global economy remained weak and some African countries saw severe domestic problems of various natures. But the world

¹¹ CEIC

¹² CEIC

economy is improving and if the AEO 2015 predictions are right, Africa will soon be closing in on the impressive growth levels seen before the 2008/09 global economic crisis¹³.

West Africa achieved relatively high growth of 6% in 2014 despite its battle with the Ebola virus. Nigeria's growth of 6.3% came mainly from non-oil sectors showing that the economy is diversifying. But Southern Africa's growth fell below 3% as the key South African economy only grew by 1.5%.

Domestic demand has continued to boost growth in many countries, while external demand has remained mostly subdued because of flagging export markets, notably in advanced countries and to a lesser extent in emerging economies. Export values of goods were also depressed by lower export prices. African exports are expected to strengthen in 2015 and 2016 as the world economy improves. In 2014, domestic demand was in most countries boosted by private consumption and public infrastructure investment with the latter also increasingly financed by issuing international sovereign bonds. On the supply side, many African countries have improved their investment climate and conditions for doing business, which enhance long-term growth prospects. Benin, Côte d'Ivoire, the Democratic Republic of the Congo (DRC), Senegal and Togo are even in the top ten countries worldwide with the most reforms making it easier to do business. Africa's supply side growth in 2014 was mainly driven by agriculture, extractive industries, construction and services, and to a lesser extent by manufacturing. But sectoral growth should not be seen in isolation, as there are important spillovers between sectors. Furthermore, modernization and structural transformation, the process by which new, more productive activities arise and resources move from traditional activities to these newer ones, is also happening within some sectors. So far African economies have been relatively resilient to the sharp fall of international commodity prices. Production of commodities has often increased despite the lower prices, and overall growth has also been boosted by other sectors. But if commodity prices remain low or decline further, growth in resource-rich countries might slow down as governments need to cut spending. Governments will be keeping a close watch on conditions in key markets, especially China and Europe. There are some positive effects, however, as lower oil prices ease inflation, increase real incomes and strengthen export markets. In countries where inflationary pressures have eased – such as Botswana, the members of the Central African Economic and Monetary Community (CEMAC), Mozambique and Rwanda – policy interest rates have been reduced to stimulate growth. By contrast, in countries where exchange rates came under pressure, such as Nigeria, central banks responded by tightening policies to stabilize exchange rates and contain inflation. Most African countries continued their prudent fiscal policies to keep budget deficits at sustainable levels. But in several countries, including oil exporters, fiscal positions weakened despite efforts to limit spending and to improve tax revenues. (Source: AEO, 2015).

The Sino-African Economic Co-operation

The long decade marriage between China and Africa historically started long-age ago since the commencement of the Bandung Conference organized in Indonesia which was in record as the first large-scale Asian–African Conference held

¹³ Africa Economic Outlook, 2015

in 1955. Since the inception of the aforesaid conference, China has been cultivating and maintaining friendly bond by spreading revolutionary ideology and offering economic and military support to its "Third World" African friends. It was On May 30, 1956, when China established the first formal diplomatic relationship in Africa, with Egypt.

The China-Africa economic tie has experienced a "great leap forward" after the first Tri-annual Forum on China-Africa Cooperation (FOCAC) – a Ministerial Conference that was held in Beijing, China, in 2000¹⁴; The general theme of the Forum was economic cooperation between China and Africa. In 2006, China issued a comprehensive policy statement "*China's African Policy*" (<http://www.focac.org/eng/zfgx/dfzc/t481748.htm>), which elucidates the principles and scope of its policy in Africa. It emphasizes China's usual non-interference policy and the Five Principles of Peaceful Coexistence¹⁵. Since then, China has provided (additional) preferential loans and credits, instituted a development fund, and offered debt relief and cancellation to Africa¹⁶. This economic relations commenced in the era of Mao Zedong, the first leader of the Chinese Communist Party, following the Chinese Civil War. Starting in the 21st century, the modern state of the People's Republic of China has built increasingly strong economic ties with Africa. There are over millions Chinese citizens residing, working and doing business in Africa and as well Africans working, studying and doing business in China.

During the 1980s and 1990s Sino-African relations were still mainly political, as China itself was undergoing extensive economic reform and opening up its economy to the rest of world. In the late 1990s China's remarkable growth performance made policy makers realize that in order to sustain high-level growth it needed to ensure its future supply of natural resources. In this regard, Africa became a particularly important region for China.

The importance of Africa in China's foreign policy culminated in the establishment of the Forum on China-Africa Cooperation (FOCAC) in 2000. The forum holds ministerial 6 conferences every three years and is an important platform to implement specific economic policy programs with Africa. Moreover, China's "Going-Global" policy, announced in 2001, also contributed to the rise in Sino-African economic relations. In order to encourage foreign trade and outward FDI, the policy provides Chinese firms with easy access to loans, foreign exchange and preferential policies for taxation, imports and exports (UNCTAD and UNDP, 2007). Although the policy is not primarily targeted at Africa, it identifies key areas in which to encourage FDI, including resource exploration projects which are a particularly

¹⁴ The Forum official website <http://www.focac.org/eng/> and the news release <http://www.mfa.gov.cn/eng/wjdt/2649/t15775.htm>.

¹⁵ The Five Principles are: mutual respect for sovereignty and territorial integrity, mutual non-aggression, non-interference in each other's internal affairs, equality and mutual benefit, and peaceful coexistence. <http://www.fmprc.gov.cn/eng/topics/seminaronfiveprinciples/t140777.htm>

¹⁶ The 3rd FOCAC Forum, China provided \$3 billion preferential loans and \$2 billion preferential buyer credits and instituted the \$5 billion China-Africa Development Fund to facilitate investment in Africa. In the fourth Forum; \$10 billion preferential loan to Africa to support infrastructure and social development projects, and another \$1 billion to the China-Africa Development Fund. In the first and second Forum, China cancelled two \$1.3 billion debts. In the third Forum, China canceled all debts relating to interest-free government loans that matured at the end of 2005 for the most indebted and least-developed African countries with diplomatic relations to China. Similar debt cancellations were announced in the fourth Forum.

important Chinese activity in Africa. When analyzing Sino-African economic relations, three channels of economic interaction are dominant, namely; Trade, Foreign Direct Investment and Foreign Aid (economic cooperation).

In line with the Beijing Declaration of FOCAC, China's policy on Africa aims at "fostering solidarity and cooperation based on partnership, consultation, consensus, friendship, interdependence, equality and mutual benefit". However, as a result of economic globalization, some countries not only in Africa lack the capacity to catch up with optimal global economic status and are therefore not exercising much of interdependence with China; rather their only option is a form of dependency theory where Sierra Leone for example in the field of commerce/trade, technology and investment relies on China. Nonetheless, China's Africa policy vows to continue to offer such African countries economic assistance with no political conditions attached and take positive measures to increase the economic benefit of the China-aid project in Africa. In October, 1999, the Chinese President proposed a dialogue forum between the two trading parties to boost economic exchange. That proposal transformed into an October summit in Beijing where FOCAC was formed. It was important south-south cooperation. So far about five (5) summits had been held at an interval of three (3) years; 2000, 2003, 2006, 2009 and 2012.

Bilateral trade increased significantly in the last decade with a total merchandise trade from \$9 billion in 2000 to over US\$200 billion in 2014 with a forecast to reach the sum of US\$400 billion by 2020 making China Africa's largest trade partner¹⁷. Overall, African exports to China (7.8 % of GDP) exceeded its imports (4.8 % of GDP) in 2012. In dollar terms, that amounts to a sizable total trade surplus of some \$ 39 billion¹⁸; African GDP data taken from World Bank (2014).

There has been an upward trend of Chinese FDI to Africa since 2000 as it increased from \$200 million to US\$30 billion in 2014 with plans to scale up to US\$100 billion by 2020, turning China into the largest developing country investor in Africa¹⁹. However, despite the fast growth in Chinese FDI flows, the actual volumes are fairly small, both in terms of African GDP and total FDI inflows in Africa. Average Chinese FDI flows to Africa in 2000-2011 accounted for only 5 % of total FDI inflows to Africa. In fact, Chinese investment is a particularly important source of capital for certain African countries

China's Economic Cooperation projects in Africa constitute both Foreign Direct Investment(FDI) and Trade indicators in addition to its political desired output on the African Continent(Biggeri and Sanfilippo, 2009; Sanfilippo, 2010). The structure of economic cooperation in Africa by China is more actively focused on infrastructure development(railways, roads, public housing, bridges and telecommunication etc.) with more premium placed in facility construction projects such as; government buildings, stadiums, hospitals and schools²⁰. Addendum to the the aforesaid, China also provides financial Aid in the form of grants, zero-interest loans, debt relief, and concessional loans as well as preferential export credits, market-rate export buyers' credits, and commercial loans from Chinese banks (Bräutigam, 2011). In addition,

¹⁷ UN Comtrade, 2014

¹⁸ UN Comtrade 2014

¹⁹ UNCTAD, 2013; MOFCOM

²⁰ Biggeri and Sanfilippo, 2009

the China Africa Development Fund launched by the China Development Bank in 2007 provides equity investment capital for Chinese enterprises to invest in Africa. The fund has received \$3 billion in capital up until 2012 and has (co-)financed 60 projects across 30 African countries, and is expected to reach its full \$5 billion capitalization in 2014²¹.

It's worthy to note that China's most significant desired objective in Africa are not primarily geared at financial Aid model but rather at a form of South-South Cooperation, particularly technical assistance. Chinese companies often work on contracted projects in Africa as a result of a greater finance or trade deal the Chinese government agreed upon with the government of a particular African country which entails some sort of economic or technical cooperation. Data on economic cooperation illustrate the level of activity of Chinese companies in African countries thereby reflecting China's emphasis on technical assistance in Africa. Therefore, we argue that data on economic cooperation may serve as an adequate proxy for the level of Chinese technical assistance to Africa. During the last decade Africa's share in China's economic cooperation worldwide has nearly tripled from 10 % in 2000 to 29 % in 2011 showing the growing importance of China's projects in Africa.

Interestingly, in the period 2000-2011 the highest turnover of Chinese economic cooperation projects occurred in Angola, Sudan, and Nigeria. As stated above, China has considerable resource investments in Sudan and Nigeria, and provided a sizeable soft loan to Angola which is repaid in oil at fixed prices.

China's investment in Africa has also positively been affected by the "Going Global" or "Stepping Out" strategy adopted by the Chinese authorities in the new millennium²². This policy represents China's concerted efforts to encourage investments in overseas markets to support economic development and sustain economic reform in China. As a consequence, China's overseas investment plays up the procurement of natural resources to meet its domestic demand induced by its strong economic growth. China's worldwide infrastructure build-out has delivered the full complement of roads, ports, railways, airports and power stations; showing an eagerness to invest in infrastructure even where the private sector tends to be deterred due to relatively low return profile and project maturities that can run over 50 years.

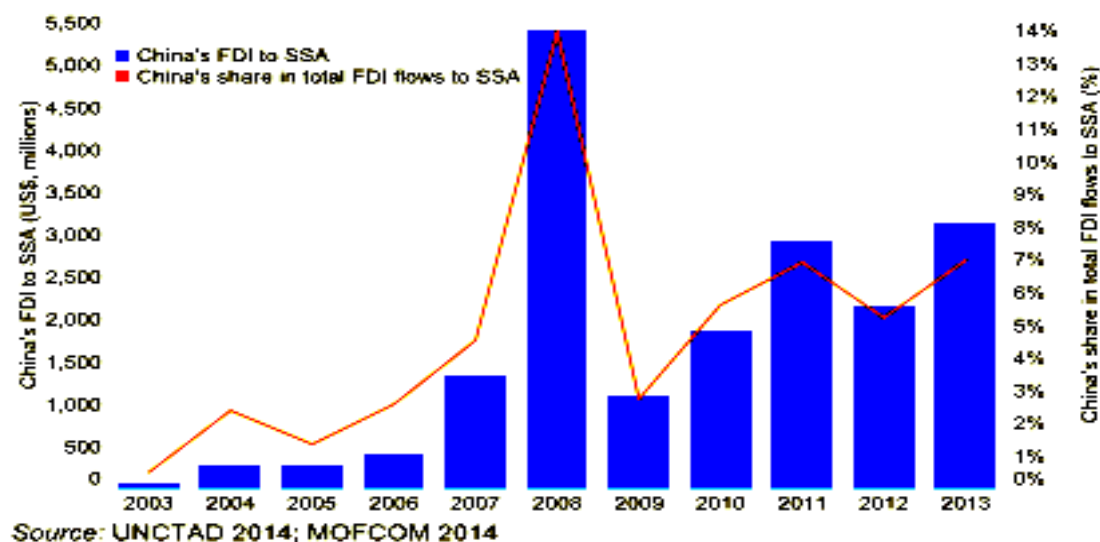
China's Outward Direct Investment (ODI) in Sub-Sahara Africa

Data on outbound Chinese FDI flows, as reported by the Ministry of Commerce of the People's Republic of China²³ do not conform to the Organization for Economic Co-operation and Development (OECD) definition of ODI which only takes private investment into account. By contrast, the MOFCOM definition includes private and public financial flows (e.g., from state-owned enterprises) from the mainland China. Data from MOFCOM (2014) indicate that Chinese FDI flows to SSA reached US\$3.1 billion in 2013, which would represent 7 % of global investment in the region.

²¹ CCS, 2013

²² 2002 issue of the *Almanac of China's Foreign Economic Relations and Trade*

²³ MOFCOM, 2014

Figure 3: China's Outward Direct Investment (ODI) Flows to SSA, 2003–13 (US\$, millions)

A share that is rapidly approaching that of the United States (7.3 %). Moreover, the total stock of Chinese ODI in SSA was recorded at almost US\$24 billion, about 5% of SSA's total ODI stock. These figures would imply that the presence of Chinese investment in SSA remains limited. For example, the ratio of Chinese ODI to SSA's aggregate GDP was just 1.5% in 2012, albeit up sharply from 0.1% in 2003. Meanwhile, the share of Chinese ODI in SSA's aggregate gross fixed capital stock would appear to have grown quite modestly, from 0.37% in 2003 to 0.78% in 2012. However, when considering these figures, the caveats about data quality and completeness noted above should be borne in mind.

Although modest in relative terms, the volume of Chinese ODI in SSA has increased substantially over the past decade. A dramatic spike in ODI in 2008 was largely attributable to a single transaction, the US\$5.6 billion purchase of a 20% share in South Africa's Standard Bank by the Industrial and Commercial Bank of China (ICBC) (The New York Times 2007). The deal was approved in 2007 and completed in March 2008; it was a major operation for ICBC, one of China's largest state-owned commercial banks. This acquisition reflects a relatively new strategy for Chinese investment in Africa in which Chinese investors purchase shares in reputable and experienced firms (although without holding a controlling interest) and then work in partnership to explore new business opportunities. Through its alliance with Standard Bank, ICBC now has access to an extensive financial network in SSA that will greatly facilitate the provision of financial services to Chinese investors in the region. If this deal is excluded, the data would show Chinese ODI in Africa remaining constant during 2008–09 and then gradually increasing from 2010 onward.

Diversification Expansion of China's ODI in SSA

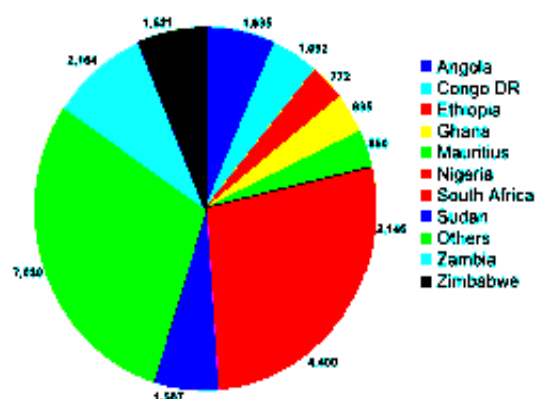
The scope of Chinese investment in SSA is extensive. Chinese ODI reaches almost all African countries, even those that do not have a formal diplomatic relation with China (e.g., São Tomé and Príncipe). However, the bulk of Chinese investment is focused on a few resource-rich countries. South Africa is the top destination, followed by Zambia, Nigeria,

Angola, and Zimbabwe²⁴. At the sector level, however, the most recent data reveal a growing diversification in investment targets. At 30%, extractive industries still account for the largest share but finance, construction, and manufacturing now make up half of total ODI.

Investment in these sectors is particularly strong in countries that have benefitted from more recent ODI, such as Ethiopia. Other important sectors include commercial services (5%); scientific research, technology and geological prospecting (4.1%); wholesale and retail commerce (2.7%); agriculture (2.5%); and real estate (1.1%)²⁵.

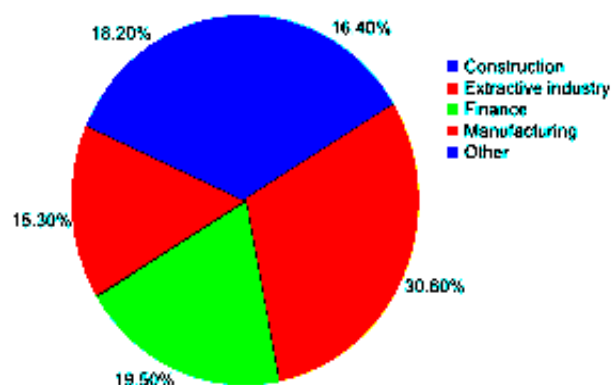
Figure4: Chinese ODI in SSA, by Country and Sector

a. Chinese FDI in SSA, by country (US\$, millions)



Source: MOFCOM 2014

b. Chinese FDI in SSA, by sector (percent)



Source: State Council of China 2013

Factor Intensity & Job Creation

Very little is known about the relative factor intensity of Chinese Investment in SSA and its contribution to job creation. However, a database produced by ODI Intelligence, a division of the Financial Times specialized in tracking ODI investment projects around the world,¹⁰ allows for some limited analysis of these dynamics. This database only includes green field projects by Chinese investors in SSA. Between January 2003 and June 2014, a total of 156 projects were recorded, a small sample even compared with the MOFCOM statistics, but one that provides important information on the relationship between investment and job creation.

²⁴ MOFCOM 2014

²⁵ State Council of China 2013

Table 2: Outward Direct Investment (ODI) Trends by Sector²⁶

Business activity	No. of projects	Jobs created		Capital investment	
		Total	Average	Total (\$USm)	Average
Manufacturing	77	39,343	510	13,283.90	172.50
Sales, marketing, and support	23	350	15	148.70	6.50
Extraction	14	14,897	1,064	8,726.10	623.30
Education and training	8	606	75	73.00	9.10
Business services	8	142	17	84.00	10.50
Construction	4	5,661	1,415	4,649.70	1,162.40
Electricity	4	264	66	1,351.00	337.80
Retail	4	154	38	32.10	8.00
ICT and Internet infrastructure	4	1,290	322	1,850.00	462.50
Logistics, distribution, and transportation	3	400	133	146.80	48.90
Other business activities	7	1,094	156	149.60	21.40
Total	156	64,201	411	30,494.90	195.50

Note: ODI = Foreign Direct Investment; ICT = information and communications technology.

Of the 156 projects recorded in the database, manufacturing projects have generated the highest number of total jobs at about 39,000, as indicated in Manufacturing projects representing more than half of all jobs created by the entire sample, although their average capital investment is smaller than that of projects in other sectors. This suggests that the relocation of Chinese manufacturing firms to SSA could have a substantial impact on employment. Extractive industries and the construction sector averaged the largest project size in investment and job creation. Government-led projects tended to be much larger than private projects and created more jobs.

Table3: ODI Trends for Public and Private Projects

Type of FDI	Jobs created			Capital investment	
	No. of projects	Total	Average	Total (\$USm)	Average (\$USm)
Government-led	93	46262	497	21509.46	231.28
Private-led	56	16032	286	6079.94	108.57

The 10 Chinese companies with the highest-value investment projects in the sample account for 38% of total job creation and 39% of total capital investment. Among these firms, Beiqi Foton Motor, a state-owned automotive manufacturing company, created the most jobs on average.

Table 4: Top 10 Chinese Firms by Job Creation and Capital Investment²⁷

²⁶ ODI Intelligence, the Financial Times Ltd.

²⁷ ODI Intelligence from The Financial Times Ltd

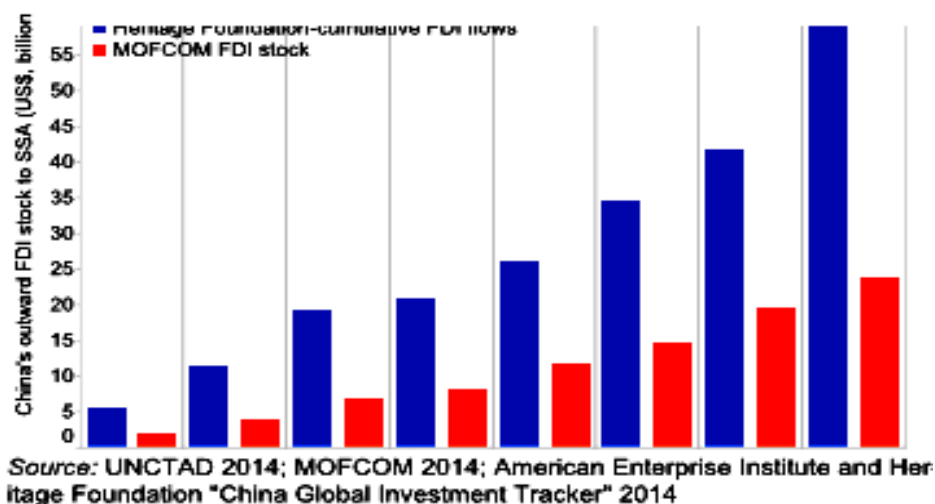
Company name	Jobs created		Capital investment	
	Total	Average per project	Total (\$USm)	Average (\$USm)
Huawei Technologies	2,188	198	1,626.60	147.90
China Nonferrous Metals Mining	6,064	606	2,011.80	201.20
ZTE	2,404	240	406.70	40.70
China Central Television	241	30	85.90	10.70
China National Petroleum	1,071	153	6,773.00	967.60
Powerway Renewable Energy	1,347	269	133.30	26.70
Beiqi Foton Motor	9,407	2,351	663.50	165.90
The China-Africa Development Fund	76	19	44.00	11.00
ZTS International Industrial (G-Tide)	656	218	71.00	23.70
GAIG Stock (Guangzhou Automobile)	1,008	336	128.20	42.70

Note: ZTE = Zhongxing Telecommunication Equipment Corporation; ZTS = Zhong Trading Solutions

Comparing Official Chinese ODI Data with Alternative Sources

A number of research institutions and international agencies have begun to specialize in tracking information on Chinese ODI from other sources, including corporate websites and news reports. The China Global Investment Tracker (CGIT), a joint initiative of the Heritage Foundation and the American Enterprise Institute, is a publicly available database that identifies and records Chinese ODI projects over US\$100 million. Its coverage is wider than that of the MOFCOM database, and it includes projects that are implemented through offshore financial centers. However, CGIT does not include projects below US\$100 million, a very high threshold that many Chinese investors do not reach. In addition, the data are based on publicly stated commitments, which often differ from actual investment flows. Comparing Chinese ODI in SSA as recorded by MOFCOM/UNCTAD with the figures in CGIT reveals a remarkable difference between the two data sets.

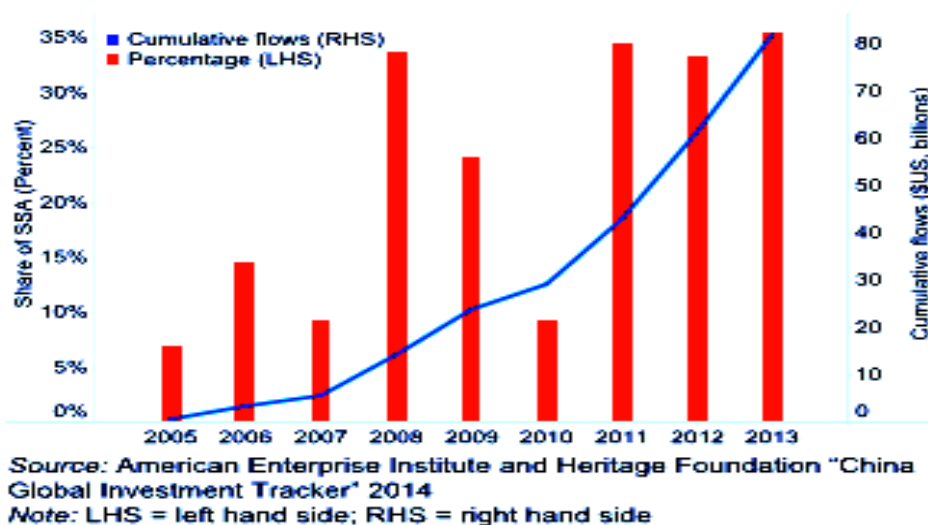
Figure 5: Total Chinese ODI in SSA, CGIT, and MOFCOM Estimates (US\$ billions)



The CGIT estimate is US\$61 billion, more than 2.5 times the MOFCOM estimate of US\$24 billion. However, although the total values differ significantly between the two databases, the direction and trend of Chinese investment in SSA appear to be similar.

Contracts record investment commitments, not actual investment flows. Nevertheless, contracts may be treated as a reliable indicator of future investment values. By 2013, the value of Chinese contracts in SSA had reached US\$82 billion, after increasing by an average of US\$13.5 billion per year since 2009.

Figure 6: Chinese Contracts in SSA (US\$ value and % of total contracts)



Moreover, SSA accounted for about 35 percent of the total value of Chinese contracts worldwide. The majority of these investment contracts were in the energy sector, particularly hydropower, and in the transportation sector, including roads, seaports, and aviation projects. Inadequate infrastructure is a major constraint on economic growth across SSA. Thus, China's involvement in infrastructure projects may help African firms to improve integration into regional and international markets.

SSA's ODI in China Remains Marginal

Despite the intensifying economic ties between China and SSA, investment overwhelmingly flows in one direction. ODI from SSA to China amounted to US\$1.4 billion in 2012, just 1.2 % of the total ODI that China received that year. Most SSA-to-China ODI originates from Mauritius, Nigeria, Seychelles, and South Africa. It includes investments in the petrochemicals, manufacturing, and wholesale and retail industries, among other sectors.

Mauritius is not only the largest African investor in China, but ranks 15th among all investors in China. This is largely the result of a "double taxation" agreement between Mauritius and China and Mauritius' status as an offshore financial center. However, even this amount is insignificant as a percentage of China's total inbound ODI (0.92% in 2011) and Mauritius's total outbound ODI (2.09% in 2011)²⁸.

²⁸ MOFCOM 2013

MOFCOM's "Annual Cooperative Audit Online of National Foreign Investment Enterprises" in 2012 indicates that Mauritius has the largest number of investment projects in China of any country in SSA. 12 Mauritius is followed by Seychelles, another offshore financial center, with South Africa and Nigeria ranking third and fourth, respectively (Table 5).

Opening Up and Expansion of China's Private Investment In SSA

The traditional focus of government-led FDI in Africa has been on natural resources¹⁶ and related infrastructure, with Chinese companies building the pipelines, power stations, roads, railways, and seaports necessary for the extraction and transportation of oil, minerals, and other natural resources. As in the rest of the world, China's engagement in Africa has involved a tight link between trade, investment, and finance. In what has become known as the "Angola model," this relationship starts with the Exim Bank of China providing a line of credit, often at concessional rates, to the government of a resource-rich country. This credit line is secured by a long-term agreement on resource rights. Chinese firms then compete for the various large infrastructure projects that will undergird the development of the country's resource sector (e.g., oilfields, mines, processing facilities, transportation networks, etc.) and will be paid directly by the Exim Bank of China.

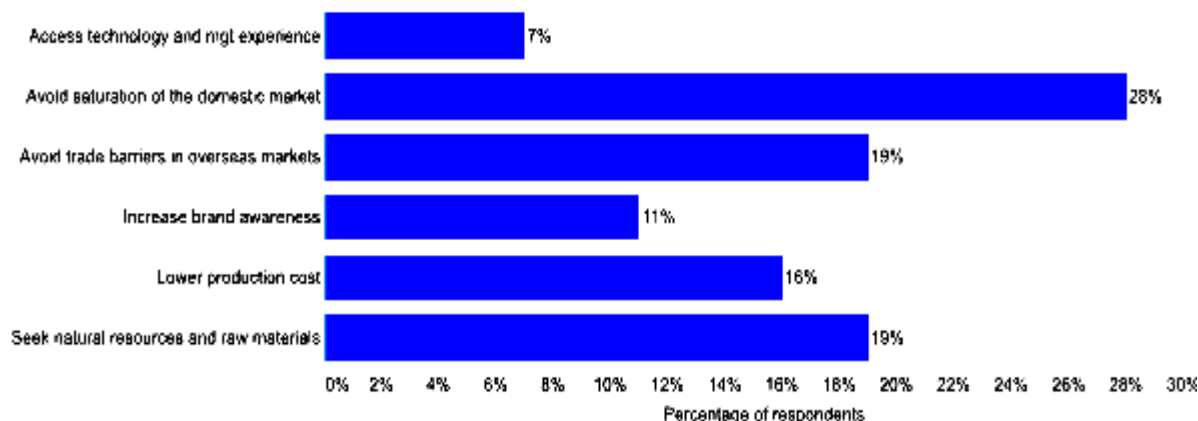
While the natural resource sector remains an important focus of Chinese FDI, manufacturing investment in SSA has increased significantly in recent years, reaching 15.3 % of total Chinese FDI in SSA in 2012. China developed its domestic manufacturing industry by concentrating its cheap labor and abundant capital in SEZs and industrial parks. Within these zones, land and infrastructure bottlenecks were relieved and a competitive business environment was established. This approach to industrialization has been so successful that variations on the model have been adopted in other countries, such as Cambodia, Mauritius, and Vietnam. However, China's original set of competitive advantages has been shifting over time; among other key changes, manufacturing wages have risen from US\$150 per month in 2005 to US\$500 in 2012, reaching more than US\$600 in coastal regions (Dinh et al. 2012).

Faced with increasing labor costs, many Chinese manufacturing firms have begun relocating to countries with lower wage rates, including several in SSA. China has facilitated this outsourcing process by officially sponsoring the construction of five SEZs in African countries (see table A4.6 in annex 4) to attract public and private investors. Although these SEZs were set up five to seven years ago, all are still in their initial development phase. Four of the five SEZs currently have fewer than 10 tenant companies operating in them (Mauritius' Jinfei Zone had no companies operating in it prior to July 2013). Many firms have signed memoranda of understanding but have not yet begun to invest. However, those companies that have started operating in the SEZs typically employ a large number of African workers: Zambia Chambishi currently employs 7,973 workers, Nigeria Ogun employs 1,619, and Ethiopia Eastern employs 1,600 (Bräutigam and Tang 2011).

Although government-led SEZs have thus far achieved only mixed results in SSA, the rise of Chinese private investment has been spectacular. In 2002, only four of the 21 Chinese FDI projects in Africa recorded by MOFCOM were privately owned; by 2013, 1,217 of 2,282 projects were private, or 53% of the total (Shen 2014). With regard to value, private investment made up about 45% of total Chinese ODI in SSA. This remarkable increase in private investment is largely

due to a set of measures adopted since 2004 aimed at promoting Chinese investment overseas. In addition, a number of funds were set up to support investment in overseas processing activities, for example the Central Foreign Trade Development Fund of RMB2.3 billion (around US\$375 million). In 2006, the MOFCOM and the All-China Federation of Industry and Commerce published a draft document calling on the government to recognize the international significance of Chinese private enterprise and establish policies to support Chinese firms in “going global”²⁹. Finally, China began offering tariff-free entry to more than 400 products (mostly manufactured goods) produced in Africa’s low-income countries, further incentivizing Chinese firms to relocate to SSA. The number of Chinese manufacturing projects in SSA rose from just seven in 2004 to 75 in 2013. During 2009, at the height of the global financial crisis, some 70 Chinese manufacturing projects were underway in Africa and 66 of these projects were privately owned (Shen 2014).

Figure 8: Chinese Firms’ Reported Motives for Investing in Africa, 2008–12



Source: CCPIT, 2012

Following its explosive growth over the past two decades, China is now an upper-middle-income country and rivals the United States for the title of world’s largest economy. However, China’s growth rate is slowing as the economy transforms, “rebalancing” from an intensive focus on production and exports to a more service-oriented, consumption-based model. Meanwhile, the government continues to pursue important structural reforms to give a greater role to the private sector, improve efficiency, and spur innovation (Dollar 2014). As this process of rebalancing continues, it will entail positive and negative effects for China’s trade and investment partners in SSA.

On the one hand, lower Chinese growth rates will decrease global demand for oil, minerals, and other natural resources and reduce international prices for these commodities, which are among the chief exports of many countries in SSA. Given that China has accounted for almost the entire increase in global demand for minerals and metals (e.g., copper, iron, lead, nickel, tin, and zinc) over the past 20 years, slowing growth in China will have a major impact on world commodity markets. Recent work by the International Monetary Fund (Drummond and Liu 2013) has shown that a 1 % point decrease in China’s real domestic fixed investment growth rate would lower SSA’s aggregate export growth rate by 0.6%. As one might expect, this effect appears to be larger for resource-rich countries and the countries in SSA that

²⁹ Cheng and Ma 2007; MOFCOM and All-China Federation of Industry and Commerce 2006

are likely to be most severely impacted are exporters of mining products, including the Democratic Republic of Congo, Guinea, South Africa, and Zambia. However, China's rebalancing also presents new export opportunities in the agricultural and manufacturing sectors. Countries in 21 SSA that have sound investment frameworks, stable governance, and a healthy investment climate will be well positioned to leverage these opportunities.

Table 5: Natural resources available in some African countries³⁰

COUNTRIES	NATURAL RESOURCES
Angola	petroleum, diamonds, iron ore, phosphates, copper, feldspar, gold, bauxite, uranium etc.
Liberia	rubber, timber, iron, diamonds, cocoa, coffee etc.
Senegal	agricultural and fish processing, phosphate mining, fertilizer production, petroleum refining, construction materials, ship construction and repair (no oil) etc.
Sierra Leone	Diamond, rutile, bauxite, timber, cocoa, coffee, petroleum, agriculture, marine resources and fish processing etc.
Zambia	copper mining and processing, construction, foodstuffs, beverages, chemicals, textiles, fertilizer, horticulture etc.
Nigeria	Crude Oil etc.

China, not trying to be a hero or anything quite like that, recognized a mutually beneficial need in Africa. China needs Africa's raw materials to maintain its thirst for fuel to run its industries and vehicles - and Africa in turn needs foreign investment and infrastructure development. The West shuns Africa generally because of its seemingly endless trail of political corruption and economic instabilities. The West is accustomed to bailing African nations out of financial troubles by yet extending lines of credit with no expectation of paying it back except by further devaluing their already depressed currency.

China, over the centuries has undergone numerous turmoil and periods of unrest as it "found" itself. Significant to this paper was the advent of the Great Proletarian Cultural Revolution which started as a result of protests regarding the educational system, disgruntled party members having a difference in opinions with Mao and the workers revolting against the Party. "In the summer of 1966, a group of Beijing high school girls protested against the system of college entrance examinations. The Central Committee acceded to the students' demand by promising a reform and postponing

³⁰ Web Google browser

the 1966 enrollment for half a year. Freed from their studies, students demonstrated in Beijing in August, touching off demonstrations of young people in general.” This radical movement caused schools to be closed down, slowed economic production and trade, and virtually severed China's relations with the rest of the world. It lasted for two years in its intense form, lingered on for another year and a half, and was not officially declared over until 1977. During this period, Chinese youths had lost a generation of education; China itself had lost its trading relations with all countries – China's desires to be an economic power was set back another ten years.

Following this revolution, China changed its foreign policies and opened trade relations with the West. ‘China started to play an active role in international organizations, and diplomatic relations were established with countries willing to recognize the People's Republic--rather than the Nationalist government on Taiwan--as the government of China. Most dramatically, contacts were begun with the United States, leading to full diplomatic recognition on January 1, 1979.

China's Official Finance In Africa: What Instruments?

Chinese development finance in Africa is unusual in that much of the financial flows from China do not constitute official development Aid (ODA). Instead, much of it comes in the form of export credits and strategic lines of credit to Chinese-related companies, among other mechanisms. In this sense, it is very similar to Japanese financial flows to China several decades ago, when Japan began its outward march with a large line of credit to China, which, at the time, was not credit-worthy either. Looking at the nature of Chinese development Aid and non-Aid to Africa provides insights into China's strategic approach to outward investment and economic diplomacy, even if exact figures and strategies are not easily ascertained.

Chinese development finance in Africa involves two distinct types of financial flow: ODA and ‘other official flows’ (OOF). ODA as defined by the OECD refers to concessionary funding given to developing countries and multilateral institutions primarily for the purpose of promoting welfare and economic development in the recipient country. Funding must be ‘concessional in character’ (i.e. involving government subsidies) and loans must have a grant element of at least 25 %, using a 10% discount rate.

While only concessional loans and grants qualify as ODA, governments also offer other official flows: funds for the donor country's firms to subsidize or guarantee their private investment in recipient countries, military aid and export credits. These funds are reported as OOF. This category includes loans that are not concessionary in character, and official bilateral transactions whatever their grant element that are primarily export-facilitating in purpose.

China provides the equivalent of ODA through three instruments: grants, zero-interest loans and concessional (*you hui dai kuan*, or fixed-rate, low-interest) loans. These instruments finance Chinese government scholarships for African students; Chinese medical teams; ‘turn-key’ construction of stadiums, government buildings, telecommunications networks and other infrastructure; technical assistance teams in agriculture and other sectors; short-term training programs; youth volunteers; and material aid (the export of Chinese goods).

Grants and zero-interest loans were the primary instruments of China's ODA until 1995, when concessional loans were introduced. According to the Chinese white paper on aid released in April this year, approximately 40 % of China's aid is financed through grants. Zero-interest loans are also a mainstay of China's aid. The debt-relief program launched by Beijing in 2000 targeted overdue zero-interest loans for cancellation, with RMB25.58 billion worth (US\$3.76 billion) cancelled, and of this, RMB18.96 billion (US\$2.79 billion) was cancelled in Africa.

Only large projects with a value of at least US\$2.4 million, and that make a minimum 50 % use of Chinese goods and services, may be funded with concessional loans. China's concessional-loan program in Africa has grown rapidly. At the end of 2005, China Export-Import Bank had cumulatively funded only about US\$800 million in concessional loans in Africa, for 55 projects. Two years later, the number of African projects had risen to 87, and the cumulative value was about US\$1.5 billion. And the government recently pledged US\$10 billion in concessional/preferential credits for Africa, to be committed by 2012.

China also supplies other official funds that do not qualify as ODA. Three categories of loans are relevant here: export buyers' credits, including preferential buyers' credits (*you hui mai fan xin dai*) and commercial-rate, export commodity-secured or 'mutual-benefit' credits (*hu hui dai kuan*); official loans at commercial rates; and strategic lines of credit to Chinese companies.

For Africa, the OOF category provided by OECD members has normally been well below the level of funds provided on ODA terms. But this is not the case for China. China's government-provided finance to Africa falls primarily into the OOF category, rather than ODA. As noted above, China's official finance in Africa consists of grants, zero-interest loans, debt relief and concessional loans (which would all qualify as ODA), as well as preferential export credits, market-rate export buyers' credits and commercial loans from Chinese banks (none of which would qualify as ODA).

In Africa, as elsewhere, Chinese aid agreements seem to follow diplomatic ties. China's ODA does not appear to be given in larger amounts to resource-rich countries, as can be seen in flows to Nigeria and the Democratic Republic of Congo. Grants and zero-interest loans are distributed fairly evenly around the continent, while concessional loans fit a country's ability to pay, either because it is middle income or because it will finance an income-generating project.

China's economic push to 'go global' is coordinated by many policy instruments, including development aid. In this way, China's strategy resembles Japan's outward march more than it resembles the experience of other OECD countries. Chinese banks have developed instruments they believe can link Africa's riches its natural resources to its development. Because they regard these resources as a source of wealth, they generally do not offer mutual-benefit loans (*hu hui dai kuan*) at concessional rates. And to the Chinese, even resource-poor countries like Ethiopia whose balance sheets might not look good sometimes have untapped capacity to service a future debt, if borrowed funds go toward productive projects. It remains to be seen whether fears about the sustainability of this debt are borne out.

2.0 Theoretical Framework

Even though China's economic ties is of a great significance that drew the attention of academic and research scholars as well as regulators but not much have been said with regards Chinese ODIs to the African Continent. Most studies have focused on documenting the expansion of Investment and trade economic relations or assessing the impact of these relations and not specifically looking at Chinese ODI as a determinant in stimulate Trade in SSA. For example; China's recent investment in Africa is generally perceived to follow the state-driven strategy of giving infrastructure and taking natural resources. Foster *et al.* (2008), for example, list some Chinese-financed infrastructure projects in Africa that are paid for by natural resources between 2001 and 2007.

Even in the 1970s, infrastructure building was a common form of assistance China offered to Africa. A reason noted by, for example, Corkin *et al.* (2008, p.2) for the apparent link between infrastructure assistance and resources rich countries is that "it is often the most resources rich states that are in dire need of infrastructure development and support." Also, Brautigam (2009) argues that China's investment in Africa is not purely driven by the natural resources possessed by African countries.

The Chinese government employs two policy banks – the China Export & Import Bank and the China Development Bank – to facilitate its economic activity in Africa. The China Export & Import Bank provides trade credits and investment loans for long-term infrastructure, energy, and mining projects in Africa. The China Development Bank, on the other hand, establishes the China-Africa Development Fund to finance China's ODI in Africa (Wang, 2007).

Addendum to ODI and trade, contracted projects are another important channel through which China interacts with Africa.⁸ These contracted projects include building of highways and roads, bridges, schools, shopping centers, housing and office buildings, water conservancy, dams, and power plants. These contracted project arrangements have been in existence since the 1970s. The amount of contracted projects has increased steadily over time. It displayed a significant jump in the 2000s after the first Forum on China-Africa Cooperation. Recently, Africa has become China's second largest engineering contract market. The dollar value of China's contracted projects dwarfs its ODI in Africa.

In sum, the economic relation between China and Africa was initially dictated by ideology and political issues. Subsequently, it shifted course and tilted towards economic considerations and development needs in China and Africa. Undeniably, China's engagement in Africa is not a sudden and recent event. In fact, China has engaged with Africa since the 1950s. The eye-catching event is the fast and large expansion of economic ties that has occurred in the past few years. It is happening so quickly that the rest of the world is scrambling to deal with the fact that for Africa China is now a major economic partner that provides capital, debt relief, and a large exports market.

The strong Chinese engagement coincides with Africa's noticeable improvement in economic performance in the new millennium. China's activity in Africa, however, is not without its critics, both in and outside Africa. The most controversial aspect springs from China's proclaimed non-interference policy, which separates business from politics. As stated in *China's African Policy* (2006), China's aid to and investment in Africa are typically unconditional – they do not tie to, say, political, economic, and governance reforms. In contrast, aid and investment from Western countries and international organizations usually come with certain conditionality.

It is argued that the money offered by China to Africa without reform conditions could undermine the rest of the world's effort in using economic incentives to revamp the undesirable political and economic conditions in Africa. Some critics consider China's policy troubling as it tolerates, and passively exacerbates, authoritarian regimes and human right violations (Brookes, 2007; Obiorah, 2008). In the name of disconnecting politics and business, China goes after economic benefits at the expense of democracy and human rights. Often cited examples include China's dealings with Angola, Sudan and Zimbabwe.

There is also some evidence of tariff jumping FDI, as Sanlippo (2010) finds that Chinese investment is higher in countries that are members of the African Growth and Opportunity Act (AGOA), a trade agreement with the United States. Further evidence of Chinese firms investing in Africa to take advantage of African access to third-country markets with the end of the Multi Fibre Arrangement (MFA), a system of textile tariffs notably limiting Chinese textile exports, in 2005. Besada, Wang, and Whalley (2008) find that when the MFA expired, many Chinese textile firms operating in African countries with preferential access to developed country textile markets shut down their operations and moved back to China.

Chinese engagement in Africa has combined trade, direct investment, and Aid MacKinnon (2010) argues that most deals between China and African countries are quasi-barter. Infrastructure investment has been a common entry point into Africa for many Chinese enterprises.

These investments have been largely funded by the Chinese Exim Bank. Besada et al (2008) argue that African countries prefer to deal with China for these projects not only because China does not attach political conditionality to their bids, but also because Chinese enterprises have been able to deliver these projects at significant cost savings.

The positive effect of Chinese ODI on bilateral trade is supported in the literature by Buckley et al. (2002), Sun (1999), Zhang and Song (2000) and Jinping and Wenjun (2008). China's ODI to Africa is expected to have positive effect on China's export to Africa. Thus, a high level of both Chinese per capita income and annual growth rate of GDP will positively affect Chinese import from Africa. Based on the similar consideration, real exchange rate and military expenditure are expected to have a negative effect on China's export to those Africa - countries. The real appreciation of Chinese RMB means the rise of the relative price in China to those of Africa - countries; this will negatively affect China's export to those countries. A large proportion of the budget reserved for defense expenditures may imply future uncertainty which means the country is politically unstable; this will have a negative effect on Chinese exports to that country. Finally, inflation in those Africa countries will have a positive effect on China's export to those countries because domestic product will become expensive, hence, will be forced to purchase (import) foreign goods.

The purpose of this thesis is to assess and examine whether Chinese ODI to Africa stimulate The Sino-African Trade Co-operation or not. The research findings will be used as a proxy by macroeconomic Authorities and regulators for policy implication.

3.0 Methodology

The study collected Secondary data from various sources such as: Ministry of Commerce of China; the Economic and Commercial Counsel of the Embassy of China; Written valuable materials and books; United Nation Conference for Trade and Development (UNCTAD), Trade flow data are from the United Nations. The research study collected data from twenty-four(24) SSA Countries for the period between 2003 and 2013(10 years) including six (6) Countries from each region in SSA: Southern Africa Development Community (SADEC), East Africa Community (EAC), Economic Community of West African States (ECOWAS) and Economic Community of Central African States (ECCAS) respectively- Angola, Benin, Botswana, Cameroon, Cape Verde, Central Africa Republic, Congo Republic, Cote D'Ivoire, DR Congo, Ethiopia, Gabon, Ghana, Kenya, Lesotho, Madagascar, Mauritius, Tanzania, Namibia, Nigeria, Sierra Leone, South Africa, Swaziland, Zambia and Zimbabwe.

The research adopts a panel econometric model and Time Series model using Stata 10, to examine the effect of Chinese ODI on the Sino-Africa bilateral trade in Africa and the effect of Chinese ODI to Africa on Chinese imports from Africa respectively for the period under review. In the panel model, Chinese export to African countries is considered as dependent variable. China's ODI in each of the host Country and some macroeconomic indicators of the host countries per capita income, annual percentage growth rate of gross domestic product (GDP), real exchange rate between RMB and local currencies, annual inflation rate of consumer price, credit available to domestic sector as percentage of GDP and military expenditure] are taken as explanatory variables.

Our primary objective in this study is to investigate whether Chinese ODI in Africa stimulate trade for resource seeking motive as well as for market seeking behavior. The results of the analysis will be presented with due discussions and assessments with empirical studies conducted with a specific focus on china's ODIs effect on the Sino-Africa trade relation.

Model Specification

The empirical model for explaining Chinese export to Africa with ODI as one of the determinant of Trade is as follows:

$$\ln(EX_{it}) = \beta_0 + \beta_1 \ln(ODI_{it}) + \beta_2(PGDP_{it}) + \beta_3(GROW_{it}) + \beta_4(REXCH_{it}) + \beta_5(INF_{it}) + \beta_6(CRED_{it}) + \beta_7(ME_{it}) + U_{it} \quad (3.1)$$

Where EX = Chinese export to each country 'i' at year 't'; PGDP = real per capita GDP (current per capita GDP divide by GDP deflator); GROW = annual percentage growth of GDP in the country; REXCH = real exchange rate (obtained by multiplying the nominal exchange rate with China's Consumer Price index and then divided by domestic consumer price index); INF = inflation, consumer price (as an annual percentage), in the country, CRED = Credit facilities available to domestic sector as a percentage of GDP, in the country; ME = Military expenditures as percentage of GDP in the country.

The empirical model for explaining Chinese imports from Africa is specified as:

$$\ln(TIM_{it}) = \beta_0 + \beta_1 \ln(TODI_{it}) + \beta_2(GROW_{it}) + \beta_3(PGDP_{it}) + U_{it} \quad (3.2)$$

Where TIM = Total value of Chinese import from Africa every year; TFDI = Total value of Chinese investment in Africa every year; GROW = annual percentage growth rate of GDP in China; PGDP = real per capita GDP in China (current per capita GDP divide by GDP deflator).

4.0 Presentation and Interpretation of Result

Econometric Analysis Panel Model Estimates:

Table 6 : Panel Model Results- Parameter for estimating (random effect)

Variables	LEX(1)	LEX(2)	LEX(3)	LEX(4)
LODI	0.145*** (0.0173)	0.0735*** (0.0156)	0.0712*** (0.0146)	0.0713*** (0.0134)
PGDP		0.000732*** (7.65e-05)	0.000664*** (7.16e-05)	0.000596*** (7.84e-05)
REXCH			-0.000414 (0.000336)	-0.000382 (0.000330)
GROW				0.00656 (0.0148)
INF				0.00389 (0.00563)
CRED				0.0113 (0.00714)
ME				-0.126** (0.0623)
Constant	20.53*** (0.283)	20.06*** (0.224)	18.57*** (0.207)	118.39*** (0.333)
Observations	261	261	261	261
R-squared	0.332	0.661	0.617	0.633
Number of Country	24	24	24	24

Standard errors in parentheses. *** p<0.01; **, p<0.05; *, p<0.1

From Table 6, it can be seen that the coefficient of the Chinese ODI variable which's its interest for the four (4) equations are positive and significant at 1 % level indicating the elasticity of Chinese Outward Direct Investment (ODI) export confirming to the significant contribution of Chinese ODI in stimulating Chinese export to Africa during the period under review. The Potential Gross Domestic Product (PGDP) is also statistically and positively significant at 1% level; The result clearly reveals that a 1% increase in ODI leads to 0.071% increase in export in conformity with the research hypothesis which reads "Chinese Outward Direct Investment in Africa is for market seeking behavior and great determinant of trade whilst the other explanatory variables; real exchange rate, annual growth rate, credit to domestic investors and inflation rate are not statistically significant. Although insignificant, these variables have the correct signs in relation to Chinese export to Africa".

Table 7: The Impact of Chinese ODI in Africa on the value of Chinese export to Africa after controlling heteroskedasticity

Variables	LEX(1)	LEX(2)	LEX(3)	LEX(4)
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LODI	0.145*** (0.0328)	0.0735*** (0.0163)	0.0712*** (0.0193)	0.0713*** (0.0179)
PGDP		0.000732*** (7.82e-05)	0.000664*** (6.96e-05)	0.000596*** (8.12e-05)
REXCH			-0.000414(0.000201)	-0.000382(0.000295)
GROW				0.00656 (0.0134)
INF				0.00389 (0.00469)
CRED				0.0110 (0.00706)
ME				-0.130** (0.0611)
Constant	20.53*** (0.413)	20.06*** (0.314)	18.57*** (0.348)	118.39*** (0.398)
Observations	261	261	261	261
R-squared	0.896	0.994	0.927	0.931
Number of Country	24	24	24	24

Standard errors in parentheses. *** p<0.01; **, p<0.05; *, p<0.1

Table 7: Parameter estimated from time series data

Variables	LTIM (1)	LTIM (2)	LTIM (3)
LTODI	0.539*** (0.0589)	0.438*** (0.0878)	0.419** (0.0761)
PGDP		0.000176* (7.01e-05)	0.000275** (6.62e-05)
GROW			0.0615 (0.0522)
Constant	17.247*** (1.186)	18.894*** (1.661)	19.191*** (1.341)
Observations	261	261	261
R-squared	0.987368	0.972449	0.98796

Robust standard errors in parentheses. ***, p<0.01; **, p<0.05; *, p<0.1

The empirical estimates for the effect of Chinese ODI to Africa on Chinese imports from Africa are shown in table 7. The estimation methodology is very crucial using time series data in estimating the impact of Chinese Outward Direct Investment to Africa on its import from Africa. The major concern with the time series is that if non-stationary of data

series persists then it may lead to spurious relationship. The coefficient of ODI is positive and statistically significant at 5% level in Equation 3 and 1% level of significant in both Equations 1 & 2. This finding confirms our hypothesis that Chinese Outward direct investment to Africa is for resource seeking motive. An increase of 1% of Chinese ODI in Africa leads to 0.419% increase in Chinese imports from Africa

Table8: Test for Heteroskedasticity

Variables	Résidu Square
LODI	-0.00716 (0.00635)
RPGDP	-2.4e-05** (1.232e-05)
REXCH	-7.19e-05 (0.000143)
GROW	-0.00741 (0.00621)
INF	-0.000139 (0.00224)
Constant	0.494*** (0.0925)
Observations	261
R-squared	0.116

Standard errors in parentheses. ***, $p < 0.01$; **, $p < 0.05$; *, $p < 0.1$.

There is evidence of Heteroskedasticity after conducting the test as shown in Table 8 ($n \cdot R^2 = 30.276 > 14.03$). To correct that, we have used command areg with robust option and we got the output.

Table 9 : Test for Unit Root by using Augmented Dickey Fuller (ADF).

Variables	Test Statistic Critical Value at 5% P-Value		
Logarithm of Total Import(LTIM)	7.814	3.9	0
Logarithm of Total ODI(LTODI)	0.812	3.2	0.893
Real per capital income(RPGDP)	1.287	3.2	0.967
Annual percentage growth(GROW)	2.169	3.2	0.2913

The result of the estimates of the Unit root test using the Augmented Dickey Fuller (ADF) as a measure to avoid spurious regression for the variable is shown in Table 9. The matrix reveals that, the indicator log Import is stationary

but log ODI, real income per capita and annual percentage growth of GDP are not stationary but have different level of integration, so no risk of co-integration which might lead to spurious regression.

The per capita income indicator is also statistically significant at 5% level. Annual growth rate of GDP is not statistically significant but it has the correct sign. This implies that China has been importing raw material from Africa with a view to sustain its economic growth. The use of robust option for time series regression take care for problems of heteroskedasticity, so we have just tested whether there is evidence of autocorrelation of the error term by using command durbina and the test give us a p-value equal to 0.6521, with null hypothesis of no serial correlation. As p-value is higher than 10%, there is no evidence of autocorrelation.

5.0 Conclusion of Research Findings

Conclusively, the study found that Chinese Outward Direct Investment (ODI) to Africa has a substantial impact on Chinese imports from Africa than Chinese export to Africa indicating the fact that Chinese ODI is a stimulant of the Sino-Africa bilateral trade relations during the period under review. The econometrics estimate reveals that an increase of 1% ODI lead to an increase of 0.42% of Chinese import from Africa and 0.07% of Chinese export to Africa and also a positive coefficient of the ODI indicator with a 1% level of significance. The efficiency of the Chinese government ODI policies is of no doubt to be counted as one of the indicator for being very successful in sustaining Chinese economic growth. The Potential Gross Domestic Product (PGDP) is also statistically and positively significant at 1% level; the result clearly reveals that a 1% increase in ODI leads to a 0.071% increase in export.

The question is if SSA is to benefit more on Chinese ODI what's the action plan towards that? The various Government of the host countries should adopt required, sound appropriate policies that will create the platform for SSA to also benefit more to be in a win-win situation with China that create the capacity of SSA countries contributing to human capital training and facilitate international exchange integration; create a conducive investment climate that will promote competition between domestic and foreign (Chinese) companies which will enhance economic growth and development; the government of the host countries can lower the tax so as to encourage Chinese potential investors to establish their companies in those host countries.

The economic growth in Sub-Saharan Africa (SSA) region per year over the past decade has approximately estimated to an average of 5%, indicating an improvement in human livelihood and better standards of living and also strengthening human development and growth indicators across the Continent, Stronger public institutions, a supportive, private sector- focused policy environment, responsible macroeconomic management, and a sustained commitment to structural reforms have greatly expanded opportunities for countries in SSA to participate in global markets. For over three (3) decades now, the Sino-African investment cooperation has rapidly expanded and growing from strength to strength. Notwithstanding the increased efficiency and growing domestic production, there is the presence of quality innovation, effective Research and Development, rapid urbanization and heavy industrialization that continue to stimulate and attract robust Chinese demand for coal, oil, and natural gas. The Chinese Banking Industry, principally the People's Bank of China, the China Development Bank, and the Export-Import Bank of China (Exim Bank

of China), have supported large-scale investments in African infrastructural development in the past decades to date. United Nations Trade and Development statistics have shown that over 2,200 Chinese enterprises are currently operating in SSA, most of them private firms.³¹

The compound growth rate of china's total trade with Africa shows that total trade between china and Africa increased by 26% between 1995 and 2012. Over this period China's imports from and exports to Africa increased by 29% and 23%, respectively.

During 2011/12, total trade between China and Africa increased by 19% from US\$166 billion in 2011 to us\$198 billion in 2012. Over these 12 months imports from Africa increased by 21%(US\$20 billion) whilst exports to Africa increased by only 17%(US\$12 billion) during this period.

After expanding at an average annual rate of 10 percent through the early 2010s, growth of China's annual gross domestic product (GDP) has slowed to 7.5 % during the past two years. The doubling of Chinese capital stock between 2005 and 2011 has resulted in excess production capacity and the rate of return on capital is declining. Meanwhile, average household consumption remains low by international standards. The Government of China has responded by initiating a gradual process of economic rebalancing designed to shift the economy toward a more sustainable model, one in which growth will be driven less by investment and exports and more by domestic consumption. These policies will be complemented and sustained by the continued implementation of deep structural reforms to promote a more open and competitive private sector. The rebalancing of the Chinese economy will not only have profound domestic implications, but will also permanently alter the pattern of international trade and investment flows, presenting important challenges and enormous opportunities for developed and developing countries.

China's lower growth rate and changing demand composition are already affecting commodity prices, with particularly strong impacts on global mineral markets. At the same time, the tripling of Chinese labor costs over the past decade has enabled countries with large labor forces and low wage rates to compete with Chinese producers and even attract investment from Chinese firms. This report explores the impacts of China's economic rebalancing on its trade and investment partners in SSA.

Furthermore, China's Outward Direct Investment (ODI) to Africa continues to flow and diversify throughout and in the post global financial crisis. A decade ago, ODI flows from China to SSA expanded geometrically from almost nothing to to US\$3.1 billion in 2013, representing 7% of global ODI flows to SSA. China has established itself as a major investor in Africa, a dynamic that runs parallel to China's growing trade involvement. China's ODI stock in SSA reached nearly US\$24 billion in 2013, reflecting an annual growth rate of 50% between 2004 and 2013.³²

³¹ UNCTAD 2014; Shen 2014

³² MOFCOM 2003-2014; Copley, Maret-Rakotondrazaka, and Sy 2014

Notwithstanding the fact that China's growing presence in Africa has contributed greatly in having a positive socio-economic turn around in the Continent especially in the area of China's ODI to Africa but yet the investment and trade relations are still fraught with difficulties and challenges which has surfaced with expanding interaction, particularly with labor practices and market strategies, competing commercial and national interests, of which China is blamed for flooding the African markets, destabilizing domestic industries and selling goods of inferior quality to Africans amongst others.

China's activities in Africa should be compatible with Africa's needs, particularly for transformation and diversification. For example, it may be time to move away from the traditional model of infrastructural investment through resource-backed loans and tied aid, to ensuring that investment in infrastructure (from China and elsewhere) closely reflects Africa's development needs. Reciprocal agreements to lower tariffs on imports of specific products (e.g., in agriculture) and the establishment of joint ventures in sectors of mutual interest, including services, may contribute to strengthening the economic links between China and Africa.

The rise of Chinese private investment may contribute to Africa's transformation and job creation. Private investment is likely to grow exponentially, in line with the Chinese government's efforts to encourage local companies to go global and explore international markets. African counterparties should make the most of these new developments. Local governments have a chance to attract a large share of this investment and should learn to interact productively with private investors, ensuring joint benefits in growth, local employment, technology transfer, and training.

The global economic crisis of 2008-09 marked the beginning of a major expansion in China's engagement with SSA, in scope and in scale. Although some foreign investors moved out of Africa, Chinese firms, already well leveraged at home and encouraged by the Chinese government, expanded their overseas operations. Mergers and acquisitions (M&As) surged and commercial lending and other financing arrangements set new records. Oil and other extractive industries remain the sectors of greatest interest to Chinese investors (at 30% of total investment), but Chinese FDI has recently undergone a marked diversification into financial services, construction, and manufacturing. Geographically, Chinese FDI continues to be concentrated in Nigeria, South Africa, Sudan, and Zambia, but it now extends across the continent. Chinese manufacturing firms have invested in countries as diverse as Ethiopia, Nigeria, and Tanzania. A review of a sample of Chinese green field investments in SSA during the past decade reveals the rising importance of the manufacturing sector and the increasingly significant contribution of Chinese FDI to job creation in countries across the continent.

Chinese banks appear to have provided some US\$52.8 billion in loans to African countries during 2003–11, equal to 2.8 percent of China's GDP. Similarly, little information is available on investment flows from countries in SSA to China. SSA's investment in China appears to be increasing, but remains marginal by international standards. South Africa is the only country in SSA with a significant investment presence in China (leaving aside Mauritius and Seychelles, which

are offshore financial centers). Financial flows from countries in SSA to China are dominated by trading companies, often subsidiaries of Chinese firms supporting the business of their parent companies.

Despite the broad diversification of Chinese investment, countries in SSA have attracted limited attention from large, export-oriented firms. Although there are exceptions-notably the Huajian shoe factory in Ethiopia and the Yuemei group in Nigeria-Chinese investment has tended to focus on activities related to extractive industries, such as the processing of mineral ores or the production of liquid natural gas. Faced with rising domestic labor costs, Chinese firms have started to relocate some of their low-skilled production lines to other countries. SSA offers abundant, inexpensive labor and proximity to Europe, but so far only a few Chinese manufacturers have moved to exploit these advantages. As a result, the percentage of goods produced by Chinese firms in SSA for export to Western markets is insignificant. Consequently, African firms are not position themselves within China's value chains, which limits the impact of Chinese investment on economic transformation and export diversification in SSA. Several explanations have been offered for SSA's weak integration into Chinese and other international production networks, including the small size of many economies in SSA, the low capacity of critical public institutions, the absence of complementary private markets, bottlenecks in essential infrastructure, and the lack of regional integration, all of which can make the establishment of large economies of scale very difficult to achieve.

The rise of Chinese private investment, particularly in the manufacturing sector, could have a transformative impact on growth and development. The rise of Chinese private investment in Africa is a new and relevant phenomenon. Most interestingly, private companies are not creating establishments in government-sponsored special economic zones (SEZs), which are in fact struggling to survive. The easing of regulations on Outward Direct Investment (ODI) in the mid-1990s and after the global economic crisis, coupled with the increasing saturation of the domestic market in China, are the key drivers of this development. In many countries (e.g. South Africa, Sierra Leone, Tanzania), Chinese small private firms are becoming a significant source of jobs and income and have productivity-enhancing spillovers, but they are competing with domestic firms in the local market.

Over the longer term, leveraging Chinese investment to support broad-based growth will require policies designed to boost the competitiveness of sectors in which China's economic rebalancing may create a comparative advantage for SSA. To date, few African countries have been able to benefit from large-scale Chinese investment outside the resource sector. However, as China's growth slows and its economy shifts toward a more consumption-driven model, it is likely that global demand for resource imports will slow as well. Countries with the most heavily concentrated export mix, particularly in the mineral and oil sectors are the most vulnerable to China's economic rebalancing and should be ready to adopt measures to mitigate the impact of negative terms-of-trade shocks. By contrast, as wage rates in China continue to rise and firms refocus their attention on domestic demand, countries in SSA will be well positioned to exploit emerging opportunities for investment in export-oriented manufacturing. Ethiopia provides an instructive example, as its

inexpensive yet relatively skilled labor force, coupled with the government's proactive efforts to court Chinese investors, have enabled Ethiopia to attract substantial investments in labor-intensive industries. Infrastructure enhancement, workforce development, and good-governance reforms offer a promising strategy for many countries in the region. Although the establishment of industrial zones has yielded mixed results, several salient success stories warrant careful attention. This report discusses how Africa could take advantage of the untapped opportunities offered by China's progressively intensifying investment and trade ties with SSA. This research study would serve as a proxy to enrich the ongoing dialogue amongst policy makers, private firms, and civil society to design and coin sound, quality and appropriate policies regarding China's increasingly important role in the growth and development of Sub-Saharan Africa with a particular reference of Chinese ODI flow to Africa as a stimulant of Sino-Africa bilateral trade.

Appendix A: Data – Definition and Sources :

The appendix lists the definitions of both the independent and explanatory indicators used in the study analyses.

<u>A: Definitions and Sources ODI :</u>	China's approved outward direct investment scaled by the host country's population. [Source: Editorial Broad of the Almanac of China's Foreign Economic Relations and Trade 2003-2013)]; China's outward direct investment in the IMF-OECD standard scaled by the host country's population. [Source: <i>Statistical Bulletin of China's Outward Foreign Direct Investment and China Commerce Yearbook</i> , the Ministry of Commerce, China (2003 – 20013)]
EX :	Chinese export to each host Country 'i' at year 't'
PGDP:	The host country's real per capital GDP (log value). [Source: <i>World Development Indicators</i> , World Bank.]
GROW :	Host country's annual percentage growth of GDP rate. [Source: <i>World Development Indicators</i> , World Bank.]
REXCH :	Real exchange rate (obtained by multiplying the nominal exchange rate with China's Consumer Price index and then divided by domestic consumer price index
INF :	Inflation, consumer price (as an annual percentage), in the country
CRED :	Credit facilities available to domestic sector as a percentage of GDP in the host Country
ME :	Military expenditures as percentage of GDP in the host country
	Total value of Chinese import from Africa every year

TIM = REFERENCES

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